

WC 139-06 Creekside at Public Landing
SUB

MSA.S.1829-6139

Martin O'Malley
Governor

Anthony G. Brown
Lt. Governor



Margaret G. McHale
Chair

Ren Serey
Executive Director

STATE OF MARYLAND
CRITICAL AREA COMMISSION
CHESAPEAKE AND ATLANTIC COASTAL BAYS

1804 West Street, Suite 100, Annapolis, Maryland 21401
(410) 260-3460 Fax: (410) 974-5338
www.dnr.state.md.us/criticalarea/

December 17, 2008

Ms. Janet Davis, Critical Area Planner
Department of Review and Permitting
Worcester County
One West Market Street, Room 1201
Snow Hill, MD 21863

Re: Construction Drawings-Creekside at Public Landing Subdivision

Dear Ms. Davis:

Thank you for submitting the revised and final subdivision plan for the above referenced project. The applicant proposes to subdivide 158.5 acres into seven lots in the Resource Conservation Area (RCA). Subsequent to review letters by LeeAnne Chandler and Marshall Johnson, I have reviewed the information submitted and have provided comments below. The most recent review conducted by Marshall Johnson was for a one lot subdivision to be deeded to the original land owner. This one lot is included in the current proposal as one of the seven lots.

The plan proposes Outlot A, portions of which are interspersed among the various proposed development lots. In reviewing the proposal, I was unable to find a definition of the term outlot in your Zoning Ordinance or subdivision regulations. Your recent explanation of outlot requirements in the underlying zoning was helpful. However, I understand that the County Zoning Ordinance does not, by definition or by practice, restrict in perpetuity the ability of a future owner to petition the County for an upgrade from an outlot to a buildable lot, or otherwise restrict in perpetuity the outlot from all types of development activity. As a result, the creation of the outlot as proposed is problematic. Specifically, the parent parcel does not contain adequate RCA acreage to support future development of the outlot without the use of growth allocation. To proceed with recordation of the outlot as proposed, we recommend that the following be added to the plat:

1. A note or preferably, a development rights summary table, stating or demonstrating that all development rights within the RCA have been exhausted by virtue of the seven proposed lots.
2. An area of hatching covering all areas of proposed outlot A so that the subdivision plat establishes a clear visual distinction between the outlot and the developable lots.

December 17, 2008

3. A note on the plat stating that future development of the proposed outlot A will result in the need for growth allocation for the entire acreage of the proposed Creekside at Public Landing subdivision.
4. Accompanying deed restrictions which make clear the restrictions covered in #s 1-3 above to individual lot owners.

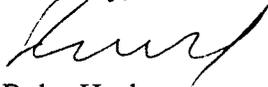
Should the County wish to proceed with platting outlots for this and for future subdivision proposals in the RCA where adequate acreage does not exist to support additional development without the use of growth allocation, we recommend that consideration be given to amending the County Code to include restrictive definitions of outlots, bulk parcels, residue parcels, etc, which prevent in perpetuity the ability of future owners to upgrade such parcels through the subdivision and building permit process.

In addition to the concerns above, I provide the following additional comments regarding the subdivision proposal. LeeAnne Chandler's comment about treating stormwater from outside sources in the Critical Area appears to have been satisfied based on the construction drawings. There is however concern regarding the illustrated elevations and inverts indicating that pocket pond "D" may back up into pond "E" which is located in the Critical Area. Please have your Public Works Staff review the invert elevations.

It appears that this application was filed by October 1, 2008 and therefore may qualify to be grandfathered under the County's impervious surface area limits and policies in place prior to July 1, 2008. If the applicant intends for this project to be grandfathered in this sense, please note that Chapter 119 of the 2008 Laws of Maryland requires the applicant to submit a lot coverage plan to the County for review and approval by July 1, 2010. Alternatively, the applicant can apply the current lot coverage limits and policies. The site plan should be amended to reflect the intent of the applicant in regard to the impervious surface area/lot coverage requirements.

Thank you for the opportunity to provide comments. Please provide information which addresses the concerns outlined above as soon as it is available. Please contact me with any questions at 410-260-3468.

Sincerely,



Roby Hurley
Natural Resources Planner
cc: WC 139-06

Martin O'Malley
Governor

Anthony G. Brown
Lt. Governor



Margaret G. McHale
Chair

Ren Serey
Executive Director

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LC
OL

August 9, 2007

Ms. Janet Davis, Critical Area Planner
Department of Review and Permitting
Worcester County
One West Market Street, Room 1201
Snow Hill, MD 21863

Re: Creekside at Public Landing Subdivision

Dear Ms. Davis:

Thank you for submitting the revised subdivision plan for the above referenced project. I have reviewed the resubmitted information and have the following comments:

1. The Worcester County Code § NR 3-108(c)(3) requires that the proposal meet the minimum density standards of one dwelling per 20 acres. The proposed subdivision would create a 2.85 acre lot. The plat note states that 17.15 acres of the parent tract will be reserved for this purpose. The note should include a statement that the 17.15 acres must be retained in open space to meet the density requirement of Lot 1, and such open space shall not be located within the boundary of any other lot. As long as it ensures that density is met for the site with any future subdivision or development, the use of a plat note as described above is acceptable.
2. As stated in the previous letter from this office, if development is proposed on the remaining portion of the parent parcel, all requirements of the Worcester County Critical Area Program for development in the RCA must be met.
3. We recommend that future lots in the RCA be clustered.

Thank you for the opportunity to provide comments. Please contact me with any questions at 410-260-3479.

Sincerely,

A handwritten signature in black ink, appearing to read "Marshall Johnson".

Marshall Johnson
Natural Resources Planner
cc: WC 139-06

Martin O'Malley
Governor

Anthony G. Brown
Lt. Governor



Margaret G. McHale
Chair

Ren Serey
Executive Director

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July 9, 2007

Ms. Janet Davis, Critical Area Planner
Department of Review and Permitting
Worcester County
One West Market Street, Room 1201
Snow Hill, MD 21863

Re: Creekside at Public Landing Subdivision

Dear Ms. Davis:

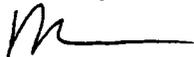
Thank you for submitting the revised site plans for the above referenced project. The applicant proposes to divide one parcel into two lots. The 232 acre parcel contains 141 acres designated as Resource Conservation Area (RCA). Although the site has been under review for a larger subdivision, the applicant now wishes to change the proposal to divide the parcel into two lots. The proposed Lot 1 has a different location and configuration than the previously reviewed Lot 1. I have reviewed the resubmitted information and have the following comments:

1. The Worcester County Code § NR 3-108(c)(3) requires that the proposal meet the minimum density standards of one dwelling per 20 acres. The proposed subdivision would create a 2.85 acre lot. The plat note on Sheet 1 of 2 states that 17.15 acres of the parent tract will be reserved for this purpose. Please have the applicant designate the location of the 17.15 acre reserved area and show it on the plat within a Conservation Easement.
2. If development is proposed on the remaining portion of the parent parcel, all requirements of the Worcester County Critical Area Program for development in the RCA must be met.
3. The Impervious Schedule table on the plan lists the 15% impervious surface allowance with a rounded figure as 0.43 acres which is 18,731 square feet. The proposed Lot 1 area is shown as 124,146 square feet, 15% of which is 18,622 square feet. Please have the applicant correct this figure on the plat.

4. The Critical Area Commission staff recommends that all required Buffer plantings and 15% afforestation plantings proposed in the June 11, 2007 Environmental Report should be installed or financial assurances for the proposed planting plan be made to the County prior to final plat approval. The report states that if the County allows it, the submitted planting plan may be revised to allow natural regeneration instead of planting. Planting the Buffer as proposed in the Environmental Report is recommended.
5. Please have the applicant correct the site plan to reflect the expanded Critical Area Buffer located as required by Worcester County. The Critical Area 100-foot Buffer line and expanded Buffer should be labeled as a single continuous line as "Critical Area Buffer" on the Site Plan and any other relevant plan sheets. In order to ensure that the Buffer location is clear for all project related activities, the applicant should correctly label the Critical Area Buffer line on all sheets of plan sets for building and related permits.
6. The August 31, 2005 DNR Wildlife and Heritage Service letter submitted with the Environmental Report expresses concern for the Threatened species, *Trillium pusillum* var. *virginianum*, known to occur within the vicinity of this site. The Environmental Report addresses this issue only by stating that the species occurs in wetlands, and that wetlands are not on Lot 1. However, the habitat for this species is facultative wet in Maryland, meaning that it usually occurs in wetlands but is occasionally found in non-wetlands; therefore, we recommend further coordination with DNR to ensure protection of this species.

Thank you for the opportunity to provide comments. Please contact me with any questions at 410-260-3479.

Sincerely,



Marshall Johnson
Natural Resources Planner

cc: WC 139-06

Robert L. Ehrlich, Jr.
Governor

Michael S. Steele
Lt. Governor



Martin G. Madden
Chairman

Ren Serey
Executive Director

**STATE OF MARYLAND
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March 7, 2006

Ms. Janet Davis, Critical Area Planner
Department of Development Review and Permitting
Worcester County
One West Market Street, Room 1201
Snow Hill, MD 21863

VIA FACIMILE

RE: Worcester County Sketch Plans – Scarboro Run, Mapleton Farm, and Salt Grass Point Farm

Dear Ms. Davis:

Thank you for submitting the site plans for the above referenced projects. I have reviewed the information submitted and have provided comments below. In order for the Commission staff to comment on the proposed subdivisions we will require additional information. Please have the applicant submit the following information to the Commission for review per Worcester County §NR 3-109 (d) – Implementation of the Atlantic Coastal Bays Critical Area Provisions, Application Requirements. This section requires the applicant to supply both an Atlantic Coastal Bays Critical Area Site Plan as outlined in § NR 3-109.1 and an Atlantic Coastal Bays Critical Area Report as outlined in § NR 3-109.2.

In addition to the above information the Commission would appreciate if the applicant can clarify issues regarding the boundaries, determination and justification of tidal vs. nontidal wetlands, private vs. State owned wetlands, and lot boundary limits that appear to extrude into State owned waters. To this regard, I have attached some guidance documents that may be helpful for the County and any applicant proposing development in areas with various types of wetlands and/or lot boundaries extending into State owned waters. The intent of the Commission is to clearly identify the wetland types, boundaries, and ownership prior to a final site plan revision. This should save the County and the applicant some time and confusion and provide for an expedited review process on future plat revisions.



Future review of all three site plans listed above will require a site visit prior to further comment in order to evaluate the wetland areas. We would like to conduct this site visit in coordination with MDE, the site engineer and a representative with the County.

In review of the limited stormwater management information provided, the County should be aware of the developers intent to artificially load mapped wetland areas with stormwater or converting existing wetland areas into stormwater basins. MDE should be contacted for comment regarding this practice prior to site plan approval.

It was also noted on the sketch plans provided that the limits of disturbance and the building restriction lines crossed into the 100 foot Buffer on several of the plans. On other plans the applicant used the 100-foot Buffer and/or the Critical Area line interchangeably with the Building Restriction Line. This is unrealistic and puts the applicant in a situation where the builder/developer could become out of compliance. The County should be aware of this during any future meetings with the applicant.

I appreciate the opportunity to comment and look forward to receiving the additional information required for site plan review. If you have any questions please feel free to contact me directly at 410-260-3476.

Best regards,



Chris Clark
Natural Resources Planner

cc: WC 139-06, WC 140-06, WC 141-06

Robert L. Ehrlich, Jr.
Governor

Michael S. Steele
Lt. Governor



Martin G. Madden
Chairman

Ren Serey
Executive Director

**STATE OF MARYLAND
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December 5, 2006

Ms. Janet Davis, Critical Area Planner
Department of Development Review and Permitting
Worcester County
One West Market Street, Room 1201
Snow Hill, MD 21863

VIA FACSIMILE

RE: Creekside at Public Landing; Tax Map 65, Parcel 48

Dear Ms. Davis:

Thank you for submitting the site plans for the above referenced project. I have reviewed the information submitted and have provided comments below. The applicant is proposing to develop a total of 37 residential lots near the end of Public Landing Road and adjacent to Scarboro Creek in Worcester County. The property may be more fully found on Worcester County Tax Map 65, Parcel 48. The site consists of approximately 221 acres±. Seven (7) of the proposed lots are fully within the Critical Area and are designated as Resource Conservation Area (RCA). Staff has reviewed the latest submittal and offers the following comments:

1. Please clarify the correct acreage used to calculate density for the proposed Critical Area lots on the site plan. It is clear in the Environmental Report that 17.41 acres of property within the Critical Area zoned as C-1 (Conservation Zone) are not used in the density calculations but it is confusing on the site plan.
2. Please provide a 100-foot Buffer line on the site plan.
3. What will be used to delineate the Buffer on the site for the future homeowners?
4. Please update the Environmental Report to reflect the actual wetland impacts and reflect those impacts on the site plan.

5. The building restriction lines and non tidal wetland buffers severely restrict some of the building sites to very small development envelopes. Are there going to be future requests for additional non tidal wetland of non tidal wetland buffer impacts?
6. The letter to Mr. Steve Dawson regarding wetland buffer impacts being eliminated does not appear to be accurate. It appears the driveway accessing what are now Lots 8 and 9 will cross the non tidal wetland buffer.
7. Please indicate on the plan what areas are currently forested and what areas are proposed to be cleared.
8. Can the roads and/or driveway sizes be minimized?
9. Several of these lots have remote septic reserve areas. Presumably this is because this is the only place they would perk. Is there any plan or room within the development envelope to establish a new septic system if one or more fail?
10. Please correct any building restriction lines extending into the Buffer.
11. Please provide any letters of authorization of impacts to tidal or non tidal wetlands as well as an approval letter from the Board of Public Works for the delineation of the private and State owned tidal boundary.
12. The lot numbers in the Critical Area have changed since the last review. Does this affect the areas referred to in the Environmental Report as being cleared?
13. Please clarify what "formal access" to open water is in regard to in the Environmental report as there is a note that homeowners may have a six foot path through the Buffer.

I appreciate the opportunity to comment and look forward to receiving the additional information required for site plan review. If you have any questions please feel free to contact me directly at 410-260-3476.

Best regards,



Chris Clark
Natural Resources Planner

cc: WC 139-06

Robert L. Ehrlich, Jr.
Governor

Michael S. Steele
Lt. Governor



Martin G. Madden
Chairman

Ren Serey
Executive Director

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January 16, 2007

Ms. Janet Davis
Worcester Co., Dept. of Dev. Review & Permitting
One West Market St., Room 1201
Snow Hill, Maryland 21863

RE: Creekside at Public Landing, Tax Map 65, Parcel 48

Dear Ms. Davis:

Thank you for providing the most recent information on the above referenced subdivision. I have reviewed the December 11, 2006 revision of the preliminary plat as well as the most recent Critical Area plan. I apologize for not providing timely comments prior to the Planning Commission meeting. After review of the submitted documents, we have the following comments:

1. We recommend an additional plat note be added to the final plat that clearly indicates that any further development within the Critical Area portion of the property (i.e., on Outlot A) will require the use of growth allocation.
2. While we recognize that the proposed impervious area within the Critical Area portion of the property is under the allowable limit, the extraneous circular driveways are contrary to the intent of the Critical Area Law to minimize impacts within 1000-feet of tidal waters. The circular portions of the driveways are 20 feet wide and the straight areas are 16 feet wide. We recommend minimal widths to provide access to the properties.
3. The Critical Area plan shows a stormwater management basin within the Critical Area adjacent to the cul-de-sac of Willow Oak Court. The Critical Area RCA cannot be used to support development outside of the Critical Area. Modifications should be made as engineering plans are finalized.

Thank you for the opportunity to comment. Please contact me at (410) 260-3477 if you have any questions or concerns.

Sincerely,

A handwritten signature in cursive script that reads "LeeAnne Chandler".

LeeAnne Chandler
Science Advisor

cc: WC139-06

TTY for the Deaf
Annapolis: (410) 974-2609 D.C. Metro: (301) 586-0450

139-06



DEPARTMENT OF
DEVELOPMENT REVIEW AND PERMITTING

Worcester County

GOVERNMENT CENTER
ONE WEST MARKET STREET, ROOM 1201
SNOW HILL, MARYLAND 21863
TEL: 410-632-1200 / FAX: 410-632-3008

BOARD OF APPEALS
PLANNING COMMISSION
AGRICULTURAL PRESERVATION

ELECTRICAL BOARD
SHORELINE COMMISSION
LICENSE COMMISSIONERS

MEMORANDUM

TO: Roby Hurley, Natural Resources Planner, Critical Area Commission
FROM: Janet Davis, Critical Area Specialist
DATE: November 21, 2008

RE: Tax Map 65, Parcel 48 – Public Landing Road (MD Route 365)
Construction Drawings & SWM Plans – “Creekside at Public Landing”

Eck

This subdivision received Preliminary Plat approval from the Planning Commission on January 4, 2007. The latest comments received from the Critical Area Commission were from LeeAnne Chandler in a letter dated January 16, 2007. There are still a few outstanding issues; however, they can (will) be resolved prior to final plat approval and recordation. While there has been a lapse in time, the owner wishes to pursue this subdivision approval.

7/9/7 MJ
8/9/7 MJ

Enclosed is a copy of the Construction Drawings and Stormwater Management Plans. This is an item for review during our December 11th Technical Review Committee meeting. Comments would be appreciated prior to that date; however, comments from the Critical Area Commission are not required until the plans proceed to the Planning Commission.

If you have any questions, please do not hesitate to contact me, at Ext. 1144; or email at jdavis@co.worcester.md.us.



October 3, 2006

ERI #X0417-0005

Mr. Doldon W. Moore, Jr.
Wetlands Administrator
Maryland Board of Public Works
P. O. Box 1510
Annapolis, MD 21404

Re: Creekside at Public Landing
Parcel 48, Tax Map 65, Second Election District
Public Landing, Worcester County, Maryland

Dear Mr. Moore:

I am writing you in regard to our effort to define the extent of private and State wetlands at the Creekside at Public Landing project located at Public Landing along the north side of Route 395. Enclosed please find five (5) copies of the report of Environmental Resources, Inc. (ERI), along with five (5) copies of the signed and sealed survey depicting the above boundaries of private tidal wetlands in accordance with the discussions following our March field visit to the property with members of MDE Tidal Wetlands Division, Chesapeake Critical Area Commission and Worcester County Department of Development, Review and Permitting. The local mean high water elevation for the project vicinity is conveniently provided by the NOAA tidal benchmark located at Public Landing. We used this information to determine that almost all of the undisturbed tidal wetlands at the site are, indeed, above the mean high water line. As per the on-site discussion, I have included the balance of the tidal wetlands disturbed by mosquito ditching and hunting activities on the east side of the site as private tidal wetlands as this area is interspersed with equipment ruts, mud flats and areas of shallow ponding. You will see that the report includes detailed information in regard to study transects evaluated within the private tidal wetlands. In addition, in 2004, a short term tide monitoring station was established by ERI at the Grand View Farms project which further codified the tidal datums established by NOAA.

I would like to thank you for the time and attention you have provided in regard to this matter. I trust that you can now promptly provide Worcester County with an approved copy of the private tidal wetlands plat so that their project approvals may move forward.

Sincerely,

ENVIRONMENTAL RESOURCES, INC.

Edward M. Lauhay
Principal

EML/lew

S:\Projects 400 to 499\0417-0005 (ScarboroCreek) Creekside@PublicLanding\Moore.X417-5.wp

Encl.

cc: John Salm, P.E.
Mr. Charles Nichols
Mr. Chris Clark, Critical Area Commission w/encl.
Mr. Joseph Kincaid, MDE Tidal Wetlands w/encl.
Ms. Rita Campbell, Worcester County w/encl.
Mr. Chris McCabe, Worcester County w/encl.

RECEIVED

OCT 9 2006

CRITICAL AREA COMMISSION

**ATLANTIC COASTAL BAYS CRITICAL AREA
ENVIRONMENTAL REPORT**

FOR

**MINOR SUBDIVISION OF LOT 1
CREEKSIDE AT PUBLIC LANDING**

Tax Map 65, Parcel 48
Worcester County, Maryland

June 11, 2007

Prepared for:

PUBLIC LANDING, LLC
P.O. Box 940
Ocean City, MD 21842
(410) 365-7116

Prepared by:

ENVIRONMENTAL RESOURCES, INC.
100 East Main Street, Suite 500
Salisbury, Maryland 21801
410-548-5320

ERI Project No. X417-0005



INTRODUCTION

Public Landing, LLC, retained Environmental Resources, Inc. (ERI), to complete this Atlantic Coastal Bays Critical Area report for the minor subdivision of Lot 1, being a 2.85-acre part of Parcel 48, Tax Map 65, located in the Second Tax District of Worcester County, Maryland. The remaining 217.40-acre portion of Parcel 48 is proposed for a residential subdivision known as Creekside at Public Landing. The Creekside at Public Landing project was the subject of a previous Critical Area report prepared by ERI. A Critical Area report is needed to address the minor subdivision of Lot 1 since the entire lot lies within the Atlantic Coastal Bays Critical Area. This report was prepared in accordance with the requirements of the Atlantic Coastal Bays Critical Area Act and guidance received from Worcester County Development Review & Permitting. The Creekside at Public Landing project inclusive of Lot 1 is located southeast of Spence, on the north side of Public Landing Road (Rt. 365), one-half mile from the intersection of Public Landing Road and Bayside Road. The location of the site is shown on the *Vicinity Map* inset on the plan entitled, *Minor Subdivision for Public Landing, LLC*, as prepared by F. Douglas Jones Surveying Associates.

The limits of both private and State tidal wetlands within Parcel 48 were identified by ERI, surveyed and subsequently approved by the Maryland Board of Public Works. The boundary of the nontidal wetlands within Parcel 48 was identified by ERI, surveyed and subsequently approved by the Maryland Department of the Environment. Nontidal wetlands are not included as part of Lot 1. Likewise, neither private or State tidal wetlands or waters are located within Lot 1. Lot 1 includes forested uplands and upland agricultural fields.

A total of 0.15 acre of existing forest lies along the southeast boundary of the site. A portion of this existing forest is also located within a 25-foot expanded Critical Area buffer for nontidal wetlands. Much of the existing forest is located within the 100-foot Critical Area buffer. Therefore, all existing forest on Lot 1 will be retained.

100'
lot 1?

Afforestation on Lot 1 is proposed in two areas. A total of 0.12 acre within the 100-foot Critical Area buffer that is not currently vegetated will be planted with forest vegetation. In addition, one forest block totaling 0.16 acre will also be planted on Lot 1 to comply with the minimum 15 percent lot area forest cover requirement of the Critical Area. The planting areas have been placed adjacent to the existing forest on Lot 1.

BM plan w/ plant #s

PROPOSED DEVELOPMENT

A total of 141.08 acres of Parcel 48 is contained in the Resource Conservation Area within the Critical Area and is zoned E-1. The proposed minor subdivision of Lot 1 is within this E-1 zone.

Lot 1 is 2.85 acres in size. The 15 percent impervious cover allowed in the Critical Area for Lot 1 is 0.43 acre. Future driveway and home construction on Lot 1 will not exceed 0.43 acre. A table is provided on the Minor Subdivision Plan. Should the area of disturbance exceed 5,000 SF for an individual home, stormwater management planning will be required. BMP's will be utilized to infiltrate this runoff into the surrounding soil and minimize impacts to water quality. The soils on the site are well suited to infiltration of stormwater.

An individual potable water well is located near the home site as shown on the minor subdivision plan. The individual wastewater drain field for Lot 1 has been located on well-drained agricultural lands further from Scarboro Creek and associated wetlands. The wastewater disposal area is mapped as the well drained Fort Mott series.

ENVIRONMENTAL FEATURES & CONDITIONS

Topography and Drainage

According to site specific topography, elevations within Lot 1 range from elevation 3 to elevation 15 (navd 88 datum). Elevations are lowest along a manmade drainage swale which crosses the northeasterly corner of Lot 1. Elevations increase to about 7 feet in the upland field surrounding the swale. Elevations continue to increase within the field area to the southwest. The highest elevation, elevation 15, is found at the site to be utilized for wastewater disposal. There are no steep slopes on

Lot 1 per the Critical Area Program; therefore, there are no slopes of 15 percent or more. In the case of Lot 1, surface drainage and groundwater flow are toward tidal wetlands located to the east of the lot.

The existing swale on Lot 1 is one of several manmade agricultural ditches within Parcel 48 excavated through uplands. These ditches lack any characteristic of streams. Furthermore, they do not have attributes which would allow them to be classified as wetlands subject to the Corps of Engineers' and Maryland Department of the Environment Regulatory Programs.

Soils and Wetlands

Soil mapping for this site is shown through Web Soil Survey 1.1(1996) (**Figure 2**) and can be reviewed at (<http://websoilsurvey.nrcs.usda.gov/app/>). There are several predominant well drained soils mapped within Lot 1 according to the Soil Survey. These are the excessively drained Evesboro series, and the Fort Mott soil series. Moderately well drained to somewhat poorly drained soils of the Woodstown series and Klej series are also found on Lot 1. A small area of the poorly drained Hurlock series is mapped on Lot 1; however, ERI's investigation of the soils within the agricultural fields confirmed areas of excessively well drained to somewhat poorly drained soils. It was confirmed that the poorly drained soils do not occur within the area of Lot 1.

Forest on this site extends from the southeast property line toward the agricultural fields. The majority of the forest is mapped as having the moderately well drained Klej soil series.

The National Wetland Inventory (NWI), Public Landing quadrangle, identifies five wetland mapping units on Parcel 48, all of which are located along the north and east sides of the site and are associated with the Scarboro Creek floodplain. In the vicinity of Lot 1, a palustrine forested needle-leaved evergreen (PFO4R) wetland is mapped proximate to the southeast property line. This is consistent with the wetland delineation performed by ERI.

Parcel 48 and the Creekside at Public Landing are the subject of the jurisdictional determination field verified by the Maryland Department of the Environment Nontidal Wetlands & Waterways Program (see *Exhibit D*).

No wetlands are located within Lot 1 and no wetland buffer impacts are proposed on Lot 1.

In accordance with Maryland Department of the Environment resource maps, and confirmed by letter from the DNR Wildlife & Heritage Service, no wetlands of special State concern exist on Parcel 48 (see *Exhibit A*).

ERI also delineated the limits of tidal wetlands including the edge of shoreline along Scarborough Creek based upon the criteria set forth in Maryland's Tidal Wetland Regulations also guided by the Maryland Department of Natural Resources' State Tidal Wetlands Maps. In addition, ERI also conducted an extensive study and prepared a report regarding these tidal wetlands and the extent to which the tidal wetlands occurred above the elevation of local mean high water. Tidal wetlands above the elevation of mean high water are private tidal wetlands.

The State of Maryland has a riparian claim to tidal wetlands and wetland waters lying below the elevation of mean high water. Private tidal wetlands, again, are those tidal wetlands which lie above the elevation of mean high water. The boundary of private tidal wetlands as delineated in the area of Lot 1 by ERI is illustrated on the Minor Subdivision Plan. The Maryland Board of Public Works has approved this boundary by letter of December 4, 2006. A copy is provided in *Appendix C*. Neither private or State tidal wetlands are located on Lot 1.

The Critical Area Plan illustrates the boundary of tidal wetlands and the 100-foot Critical Area buffer which has been established from its landward limit. For sensitive areas like nontidal wetlands contiguous to Critical Area buffer, the Critical Area buffer has been extended to take the nontidal wetlands and their buffer 25 feet beyond the nontidal wetland boundary. The Critical Area buffer is shown on the Minor Subdivision Plan for Lot 1.

Forest Cover and Functions

Within Parcel 48, forested uplands occur intermittently in a band extending from the southeast property line to the northwestern property boundary between the agricultural field and the tidal wetland boundary. Dominant vegetation in the forest canopy, understory, and herbaceous layer varied slightly across the site. Dominant tree species include loblolly pine (*Pinus taeda*, FACU), sweet gum (*Liquidambar styraciflua*, FAC), tulip poplar (*Liriodendron tulipifera*, FACU), and red maple (*Acer rubrum*, FAC). Plant species dominating the understory include American holly (*Ilex opaca*, FACU+), black gum (*Nyssa sylvatica*, FAC), and American hornbeam (*Carpinus caroliniana*, FAC). Dominant plants within the herbaceous layer include netted chain fern (*Woodwardia areolata*, FACW+), Japanese honeysuckle (*Lonicera japonica*, FAC-), stout wood reed grass (*Cinna arundinacea*, FACW+), and common greenbrier (*Smilax rotundifolia*, FAC). The soil profiles observed in the upland area were typical of the somewhat poorly drained to moderately well-drained soils of the Klej or Woodstown series. Existing upland forest within Lot 1 totals 0.15 acre. +0.28 = 43

Critical Habitat

2.85 ac

15% = 0.4275 ac

0.28 ac proposed ∴ ok

The Maryland DNR Wildlife & Heritage Service (WHS) and U.S. Fish & Wildlife Service were sent a request to review their files for known or suspected presence of any federal or state listed rare, threatened or endangered species located on Parcel 48. A copy of the response letters are provided in *Exhibit A*. After their records search they have no specific comments pertaining to federally-listed threatened or endangered species. The DNR Wildlife and Heritage letter mentions the occurrence of dwarf trillium, a State-listed threatened species in the project vicinity. This species commonly occurs in forested wetlands. No wetlands are included on Lot 1.

The DNR analysis also suggests the possibility of forest interior dwelling bird habitat on this site. Forest interior dwelling bird habitat occurs where contiguous forest blocks greater than 100 acres are present.

Due to a break in forest wider than 35 feet located on the northwest part of Parcel 48, only forest on the west side of Parcel 48 is part of a contiguous forest block greater than 100 acres. Therefore, no forest interior dwelling bird habitat occurs on Lot 1.

Furthermore, no clearing or disturbance of the existing forest on Lot 1 is proposed.

Forest Enhancement and Critical Area Buffer Planting Plan

The Critical Area planting plan for Lot 1 is being presented in the format of a buffer management plan as previously directed by Mr. Lackie, the former Worcester County Natural Resources Administrator. Afforestation methodology is being reviewed by the county and natural regeneration and seedling planting may be approved for use in the Critical Area in the future. If the revision is made prior to the installation of plant material on Lot 1, this planting plan will be permitted to be revised. *

A 0.12-acre afforestation planting area is identified on the *Minor Subdivision Plan for Public Landing, LLC* prepared by F. Douglas Jones Surveying Associates as "Critical Area Buffer, Afforestation A." In addition, a total of 0.16 acre of forest must be planted on Lot 1 in order to meet the Critical Area requirement of 15 percent forest coverage. This planting area is identified on the Minor Subdivision Plan as "Additional Afforestation to Meet Critical Area 15% Forest Cover Requirement."

There will be a total of nine tree species, four small tree species, and four large shrub species used to vegetate the Critical Area planting areas on Lot 1. The following list identifies the common and scientific name, plant indicator status, and the credit that is assigned for reforestation purposes by the county for each plant species proposed. The total number of trees and shrubs is also provided.

Critical Area Planting Species Selection				
Common Name	Scientific Name	Indicator Status	Planting Credit (SF)	Combined Total for Buffer Areas A through H and Mitigation Areas A and B (Number of Plants)
TREES				
Black Cherry	<i>Prunus serotina</i>	FACU	200	2
Hackberry	<i>Celtis occidentalis</i>	FACU	200	2
Eastern Red Cedar	<i>Juniperus virginiana</i>	FACU	200	3
Red Maple	<i>Acer rubra</i>	FAC	200	5
Sassafras	<i>Sassafras albidum</i>	FACU-	200	2
Southern Red Oak	<i>Quercus falcata</i>	FACU-	200	4
Virginia Pine	<i>Pinus virginiana</i>	FACU	200	3
White Oak	<i>Quercus alba</i>	FACU-	200	2
Willow Oak	<i>Quercus phellos</i>	FAC+	200	2
SMALL TREES				
Crepe Myrtle	<i>Lagerstroemia</i>	FACU	100	12
Flowering Dogwood	<i>Cornus florida</i>	FACU-	100	11
Persimmon	<i>Diospyros virginiana</i>	FAC-	100	11
Serviceberry	<i>Amelanchier canadensis</i>	FAC	100	10
LARGE SHRUBS				
Arrowwood	<i>Viburnum dentatum</i>	FAC	75	10
Groundsel Bush	<i>Baccharis halimifolia</i>	FACW	75	9
Red Osier Dogwood	<i>Cornus stolonifera</i>	FACW+	75	9
Smooth Alder	<i>Alnus serrulata</i>	OBL	75	9

Substitutions will be allowed based on species available at the time of planting. However, the substitutions must be reviewed and approved by the Worcester County Department of Development, Review & Permitting for suitability prior to purchase.

A total of 0.28 acre of existing agricultural field will be planted in order to establish the vegetated 100-foot Critical Area buffer and to meet the 15 percent forest cover requirement. Functions of the Critical Area buffer are as stated in the Atlantic Coastal Bays Critical Area regulations. These functions include the removal or reduction of harmful or toxic substances in runoff entering the Bays, minimizing human impacts on the aquatic resources, maintaining an area of transitional habitat between aquatic and upland communities, maintaining the natural environment of streams and protecting wildlife habitat. At the end of the individual planting area breakdowns, there is a summary of the Critical Area afforestation and mitigation area required and the area provided by the plan.

No grading is necessary to implement the planting plan for Lot 1.

Critical Area Buffer Planting A			
Common Name	Number of Plants	Planting Credit (SF)	Area Subtotal (SF)
Black Cherry	1	200	200
Hackberry	1	200	200
Eastern Red Cedar	1	200	200
Red Maple	2	200	400
Sassafras	1	200	200
Southern Red Oak	2	200	400
Virginia Pine	1	200	200
White Oak	1	200	200
Willow Oak	1	200	200
Crepe Myrtle	5	100	500
Flowering Dogwood	5	100	500
Persimmon	5	100	500
Serviceberry	4	100	400
Arrowwood	4	75	300
Groundsel Bush	4	75	300
Red Osier Dogwood	4	75	300
Smooth Alder	4	75	300
Total Credit (SF)			5300

Additional Afforestation to Meet Critical Area 15% Forest Cover Requirement			
Common Name	Number of Plants	Planting Credit (SF)	Area Subtotal (SF)
Black Cherry	1	200	200
Hackberry	1	200	200
Eastern Red Cedar	2	200	400
Red Maple	3	200	600
Sassafras	1	200	200
Southern Red Oak	2	200	400
Virginia Pine	2	200	400
White Oak	1	200	200
Willow Oak	1	200	200
Crepe Myrtle	7	100	700
Flowering Dogwood	7	100	700
Persimmon	6	100	600
Serviceberry	6	100	600
Arrowwood	6	75	450
Groundsel Bush	5	75	375
Red Osier Dogwood	5	75	375
Smooth Alder	5	75	375
Total Credit (SF)			6975

Critical Area Buffer Afforestation Area Summary		
Planting Area	Afforestation Required to Plant Non-vegetated Buffer and Mitigation Areas (SF)	Proposed Planting Credit (SF)
Afforestation A	5,227	5,300
15% Afforestation	6,970	6,975
Total Credit (SF)	12,197	12,275

The required afforestation planting within the Critical Area buffer is 0.28 acre (12,197 SF). The proposed plantings exceed the required total of 0.28 acre. This plan may be revised to incorporate natural regeneration and/or seedling planting if the county revises their program. A budget for Critical Area planting is provided in *Exhibit B*. X

Planting within the Critical Area will occur during the period of March 15 through May 15. After initial planting, a two-year monitoring period will begin. During that period the developer will make an assessment of the need for reinforcement planting at the end of each growing season. Any reinforcement planting shall occur the following spring.

Prior to planting the site will receive a fall herbicide treatment and subsequent mowing to control weed growth. Immediately prior to planting the planting sites will be seeded with annual ryegrass at the rate of 10 lbs. per acre and switchgrass (*Panicum virgatum*) at the rate of 15 lbs. per acre.

Following initial installation, the large caliper trees will be evaluated as to the need for watering on a biweekly basis during the summer months of the first growing season. An assessment as to the need for pest control measures or seasonal mowing to control competing vegetation will be done by the developer. Using a process of adaptive management, the developer will implement watering, mowing or other measures to insure success of the planting.

Following a two-year period of monitoring, the developer will submit statistical evidence of Critical Area planting success with a request for release of bond to the Worcester County Department of Development, Review & Permitting.

PROJECT IMPACTS

Lot 1 will be developed as a single home site with an individual well and wastewater system. Lot 1 in combination with open space retained on the Creekside at Public Landing project meets the density requirements of the Critical Areas of one dwelling per 20 acres. Most of the lot (2.7 acres) consists of agricultural lands.

No impacts to existing forest or forested wetland buffers are proposed. Wetlands are not included within the area of Lot 1.

SUMMARY AND CONCLUSIONS

The minor subdivision of Lot 1 from Parcel 48 has been designed to meet the requirements of the Atlantic Coastal Bay Critical Area Program. The size of Lot 1 in combination with open space retained as part of the Creekside at Public Landing project meets the density requirements of the Critical Area Program. All open lands within the 100-foot Critical Area buffer and expanded buffer will be afforested. Additional afforestation is provided to meet a minimum 15 percent forest cover over the lot area. The area of forest planting within the Critical Area is 0.28 acre. The locations of nearby State tidal wetlands, private tidal wetlands and nontidal wetlands have been identified, buffered or avoided by the proposed minor subdivision.

S:\Projects 400 to 499\0417-0005 (ScarboroCreek) Creekside@PublicLanding\CritAreaRpt.Lot 1 MINOR SUBDIVISION.X417-5.wpd/lw

APPENDIX A

**AGENCY RESPONSE LETTERS
THREATENED AND ENDANGERED SPECIES**

CREEKSIDE AT PUBLIC LANDING

Tax Map 65, Parcel 48

WORCESTER COUNTY, MARYLAND



MARYLAND
DEPARTMENT OF
NATURAL RESOURCES

Robert L. Ehrlich, Jr., Governor

Michael S. Steele, Lt. Governor

C. Ronald Franks, Secretary

August 31, 2005

Mr. Spencer Aycock
Environmental Resources, Inc.
One Plaza east, Suite 500
106 East Main Street
Salisbury, MD 21801-4981

SEP - 3 2005

RE: Environmental Review for Scarboro Creek Property, Tax Map 65 Parcel 48, Worcester County, Maryland.

Dear Mr. Aycock:

The Wildlife and Heritage Service has determined that there are no State or Federal records for rare, threatened or endangered species within the boundaries of the project site as delineated. As a result, we have no specific comments or requirements pertaining to protection measures at this time. Please note however that the utilization of state funds, the need to obtain a state-authorized permit, or changes to the plan might warrant additional evaluations that could lead to protection or survey recommendations by the Wildlife and Heritage Service. Please contact us again for further coordination if this project falls into one of those categories.

We would also like to point out that our initial evaluation of this project should not be interpreted as meaning that it is not possible for rare, threatened or endangered species to be present. Certain species could be present without documentation because adequate surveys may not have been conducted in the past. Although we are not requiring any surveys, we would like to bring to your attention that Wildlife and Heritage Service's Natural Heritage database records do indicate that there is an occurrence of state-listed threatened Dwarf Trillium (*Trillium pusillum* var. *virginianum*) known to occur within the vicinity of the project site. If the appropriate habitat is present for this species it could potentially occur on the project site itself. Since the population of this native plant has declined historically we would encourage efforts to help conserve it across the state. Feel free to contact us if you would like technical assistance regarding the conservation of this important species.

Our analysis of the information provided also suggests that the forested area on the project site contains Forest Interior Dwelling Bird habitat. Populations of many Forest Interior Dwelling Bird species (FIDS) are declining in Maryland and throughout the eastern United States. The conservation of this habitat is mandated within the Critical Area and must be addressed by the project plan. Specifically, if FIDS habitat is present, the following guidelines should be incorporated into the project plan:

1. Restrict development to nonforested areas.
2. If forest loss or disturbance is unavoidable, concentrate or restrict development to the following areas:
 - a. the perimeter of the forest (i.e., within 300 feet of existing forest edge)
 - b. thin strips of upland forest less than 300 feet wide
 - c. small, isolated forests less than 50 acres in size
 - d. portions of the forest with low quality FIDS habitat, (i.e., areas that are already heavily fragmented, relatively young, exhibit low structural diversity, etc.)

Tawes State Office Building • 580 Taylor Avenue • Annapolis, Maryland 21401

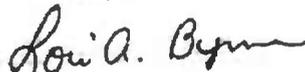
410.260.8DNR or toll free in Maryland 877.620.8DNR • www.dnr.maryland.gov • TTY users call via Maryland Relay

3. Maximize the amount of forest "interior" (forest area >300 feet from the forest edge) within each forest tract (i.e., minimize the forest edge:area ratio). Circular forest tracts are ideal and square tracts are better than rectangular or long, linear forests.
4. Minimize forest isolation. Generally, forests that are adjacent, close to, or connected to other forests provide higher quality FIDS habitat than more isolated forests.
5. Limit forest removal to the "footprint" of houses and to that which is necessary for the placement of roads and driveways.
6. Minimize the number and length of driveways and roads.
7. Roads and driveways should be as narrow and as short as possible; preferably less than 25 and 15 feet, respectively
8. Maintain forest canopy closure over roads and driveways.
9. Maintain forest habitat up to the edges of roads and driveways; do not create or maintain mowed grassy berms.
10. Maintain or create wildlife corridors.
11. Do not remove or disturb forest habitat during April-August, the breeding season for most FIDS. This seasonal restriction may be expanded to February-August if certain early nesting FIDS (e.g., Barred Owl) are present.
12. Landscape homes with native trees, shrubs and other plants and/or encourage homeowners to do so.
13. Encourage homeowners to keep pet cats indoors or, if taken outside, kept on a leash or inside a fenced area.
14. In forested areas reserved from development, promote the development of a diverse forest understory by removing livestock from forested areas and controlling white-tailed deer populations. Do not mow the forest understory or remove woody debris and snags.
15. Afforestation efforts should target a) riparian or streamside areas that lack woody vegetative buffers, b) forested riparian areas less than 300 feet wide, and c) gaps or peninsulas of nonforested habitat within or adjacent to existing FIDS habitat.

The Critical Area Commission's document "A Guide to the Conservation of Forest Interior Dwelling Birds in the Chesapeake Bay Critical Area" provides details on development standards and information about mitigation for projects where impacts to FIDS habitat cannot be totally avoided. Mitigation plantings for impacts to FIDS habitat may be required under the local government's Critical Area Program. The amount of mitigation required is generally based in whether or not the guidelines listed above are followed.

Thank you for allowing us the opportunity to review this project. If you should have any further questions regarding this information, please contact me at (410) 260-8573.

Sincerely,



Lori A. Byrne,
Environmental Review Coordinator
Wildlife and Heritage Service
MD Dept. of Natural Resources

ER #2005.1533.wo
Cc: S.A. Smith, DNR
R. Esslinger, CAC



United States Department of the Interior

FISH AND WILDLIFE SERVICE
Chesapeake Bay Field Office
177 Admiral Cochrane Drive
Annapolis, MD 21401



September 2, 2005

SEP - 8 2005

Spencer Aycock
ERI
One Plaza East, Suite 500
Salisbury, MD 21801-4981

RE: Scarboro Creek Property, Worcester County, MD

Dear Mr. Aycock:

This responds to your letter, received July 13, 2005, requesting information on the presence of species which are federally listed or proposed for listing as endangered or threatened within the vicinity of the above reference project area. We have reviewed the information you enclosed and are providing comments in accordance with section 7 of the Endangered Species Act (87 Stat. 884, as amended; 16 U.S.C. 1531 *et seq.*).

Except for occasional transient individuals, no federally proposed or listed endangered or threatened species are known to exist within the project impact area. Therefore, no Biological Assessment or further section 7 Consultation with the U.S. Fish and Wildlife Service is required. Should project plans change, or if additional information on the distribution of listed or proposed species becomes available, this determination may be reconsidered.

This response relates only to federally protected threatened or endangered species under our jurisdiction. For information on the presence of other rare species, you should contact Lori Byrne of the Maryland Wildlife and Heritage Division at (410) 260-8573.

An additional concern of the Service is wetlands protection. Federal and state partners of the Chesapeake Bay Program have adopted an interim goal of no overall net loss of the Basin's remaining wetlands, and the long term goal of increasing the quality and quantity of the Basin's wetlands resource base. Because of this policy and the functions and values wetlands perform, the Service recommends avoiding wetland impacts. All wetlands within the project area should be identified, and if construction in wetlands is proposed, the U.S. Army Corps of Engineers, Baltimore District, should be contacted for permit requirements. They can be reached at (410) 962-3670.

We appreciate the opportunity to provide information relative to fish and wildlife issues, and thank you for your interests in these resources. If you have any questions or need further assistance, please contact Maricela Constantino at (410) 573-4542.

Sincerely,

C. A. Miser

MJ Mary J. Ratnaswamy, Ph.D.
Program Supervisor, Threatened and Endangered Species

APPENDIX B

CRITICAL AREA PLANTING SHEET AND BUDGET

CREEKSIDE AT PUBLIC LANDING

Tax Map 65, Parcel 48

WORCESTER COUNTY, MARYLAND

Mitigation Credit Calculation for Plantings					
Plant Type	Common Name	Size of plant material	Credit	# Plants	Sub-Total Credit
Large Tree	See CA report	1 1/2" cal	200		
Small Tree	" "	1/2" - 3/4" cal.	100		
Large Shrubs	" "	3'-4' container	75		
Small Shrub			50		
Herbaceous Plants			2		
Total					

Cost Calculation for Plantings & Installation							
Plant Type	Common Name Of Plant	Plant cost	# of Plants	Total cost of plants	Labor cost per plant	Total Labor Cost	Sub-total Cost of Plants and Labor
Large Tree	See CA report	75	25	1875	32	800	2675
Small Tree	See CA report	20	45	900	12	540	1440
Large Shrub	See CA report	8	37	296	5	185	481
Small Shrub							
Herb. Plants							
Sub-total			107	3071		1525	4596
Total cost of Plants and Labor							\$ 4596
(8ZS 1-124, 125% of estimated cost of plants and installation							x 1.25
Bond Amount for Planting Agreement							\$ 5745

Inspection Checklist		
Date installed:	Date Bond returned:	
Date inspected	Inspector	Condition of Plants or additional notes
Limits of Clearing:		

APPENDIX C

**MARYLAND BOARD OF PUBLIC WORKS
PRIVATE TIDAL WETLAND BOUNDARY APPROVAL LETTER**

CREEKSIDE AT PUBLIC LANDING

Tax Map 65, Parcel 48

WORCESTER COUNTY, MARYLAND



Doldon W. Moore, Jr.
Wetlands Administrator

State of Maryland
Board of Public Works

Wetlands Administration
Post Office Box 1510
Annapolis, Maryland 21404
410-260-7791
Fax: 410-974-5240
Toll Free: 1-877-591-7320

Robert L. Ehrlich, Jr.
Governor

William Donald Schaefer
Comptroller

Nancy K. Kopp
Treasurer

Sheila C. McDonald
Executive Secretary

December 4, 2006

Edward M. Launay
Environmental Resources, Inc.
One Plaza East, Suite 500
106 East Main Street
Salisbury, Maryland 21801-4981

Re: Creekside at Public Landings - Worcester County

Dear Mr. Launay:

This is in response to your October 10, 2006, letter and the attached signed/sealed survey plate (Sheet 1 of 5) dated August 14, 2006.

You have provided a detailed report as to the explanation of the National Oceanic and Atmospheric Administration (NOAA) tidal benchmarks that were employed in order to determine the elevation of mean high water at the above-referenced site. It is further understood that data from an on-site tide monitoring station that was located along Pawpaw Creek in regards to the Grand View Farm mapping project, was utilized to correlate the mean high water elevation.

Based on published NOAA data for Tidal Stations, located at Sandy Hook, New Jersey (Station ID: 8531680) and Public Landing, Maryland (Station ID: 8570649), it has been determined that the elevation of mean high water is 0.639 feet as related to Public Landing datum.

It is noted that this elevation is slightly higher than the 0.63 feet that was determined for Grand View Farms which is located south of this project site and across MD Route 365.

Tidal Wetlands Boundary Maps 96 and 97 depict the Tidal Wetlands as mapped for the State's Tidal Wetlands regulatory program. However, Maryland's Tidal Wetlands are divided into two distinct classifications: State Tidal Wetlands and Private Tidal Wetlands, with the first classification being sovereign lands and the latter being under private, individual ownership. State Tidal Wetlands are defined as to "mean any land under the navigable waters of the State below the mean high tide, affected by the regular rise and fall of the tide." Private Tidal Wetlands are defined as to "mean any land not considered "State wetlands" bordering on or lying beneath tidal waters, which is subject to regular or periodic tidal action and supports aquatic growth."

Therefore, it has been determined that all mapped Tidal Wetlands, which are located above the elevation of 0.639 (mean high water), are delineated as Private Tidal Wetlands. This certification of tidal

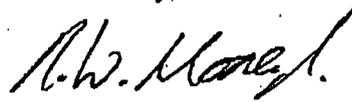
Internet address: <http://www.bpw.state.md.us> • e-mail address: dmoore@comp.state.md.us
For the hearing impaired: MRS 711 (MD) or 1-800-735-2258 • EOE

Edward M. Launay
December 4, 2006
Page 2

datum information and review of the attached plate has been undertaken in concert with staff from the Chesapeake Bay Critical Areas Commission and the Maryland Department of the Environment, Wetlands and Waterways Program.

If you have any questions or need additional information, please contact me directly.

Sincerely,



Doldon W. Moore, Jr.
Wetlands Administrator

Enc: ERI October 3, 2006 letter
August 14, 2006, plate with Approval Stamp

Cc: Gary Setzer, MDE (letter only)
Joe Kincade, MDE
Chris Clark, CAC

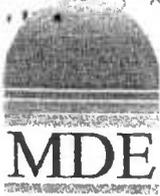
APPENDIX D

**NONTIDAL WETLAND AND WATERWAY JURISDICTIONAL
DETERMINATION**

CREEKSIDE AT PUBLIC LANDING

Tax Map 65, Parcel 48

WORCESTER COUNTY, MARYLAND



MARYLAND DEPARTMENT OF THE ENVIRONMENT

Water Management Administration

Nontidal Wetlands & Waterways Division

District Court/Multi-Service Center • 201 Baptist Street • Salisbury, MD 21801

Phone: (410) 713-3685 • Fax: (410) 713-3686

Robert L. Ehrlich, Jr.
Governor

Kendl P. Philbrick
Secretary

Michael S. Steele
Lt. Governor

Jonas A. Jacobson
Deputy Secretary

November 30, 2006

Kelly Henry, Zoning Administrator
Worcester County
Department of Development, Review & Permitting
Government Center
One West Market St., Rm 1201
Snow Hill, Maryland 21863

Application Tracking #: 200666513
WMA #: 05-NT-2181
Project Description: Subdivision
Project Manager: Steve Dawson
(410) 713-3685

DEC 1 - 2006

Dear Ms. Henry:

Ed Launay of Environmental Resources, Inc. has requested that I contact you in reference to the proposed **Creekside at Public Landing** project. I will be on leave through the coming weeks and I am concerned that my absence might create some unwarranted delays in local approvals should they require a reference to the existing wetland locations on this property.

On October 27, 2006, I visited this site. During this visit I inspected areas of proposed activities potentially impacting wetlands and buffers that exist on the property. These were illustrated on the site plan submitted with the application for this project that we received in this office on October 17, 2006.

We are still in the review process for this project. However, at this time, based on this site visit, I can inform you that the wetland delineation submitted with this application appears to be essentially correct. The application is still pending and is not likely to receive final approval until after the first of the year. With final approval, all such site plans indicating a wetland delineation become formally accepted and the wetland boundary is likewise formally accepted.

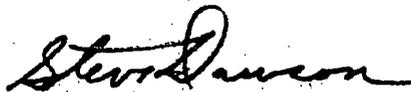


Kelly Henry, Zoning Administrator
Worcester County
Department of Development, Review & Permitting
Re: Tracking #200666513/05-NT-2181

Page 2

If you have any questions please feel free to contact me, either at the above number, or on my cell phone at 443-463-9475.

Sincerely,



Steve Dawson
Chief, Eastern Region
Nontidal Wetlands & Waterways Division

cc: Ed Launay - ERI

200666513a.LTR



Doldon W. Moore, Jr.
Wetlands Administrator

State of Maryland
Board of Public Works

Wetlands Administration
Post Office Box 1510
Annapolis, Maryland 21404
410-260-7791
Fax: 410-974-5240
Toll Free: 1-877-591-7320

139-06

Robert L. Ehrlich, Jr.
Governor

William Donald Schaefer
Comptroller

Nancy K. Kopp
Treasurer

Sheila C. McDonald
Executive Secretary

December 4, 2006

Edward M. Launay
Environmental Resources, Inc.
One Plaza East, Suite 500
106 East Main Street
Salisbury, Maryland 21801-4981



Re: Creekside at Public Landings - Worcester County

Dear Mr. Launay:

This is in response to your October 10, 2006, letter and the attached signed/sealed survey plate (Sheet 1 of 5) dated August 14, 2006.

You have provided a detailed report as to the explanation of the National Oceanic and Atmospheric Administration (NOAA) tidal benchmarks that were employed in order to determine the elevation of mean high water at the above-referenced site. It is further understood that data from an on-site tide monitoring station that was located along Pawpaw Creek in regards to the Grand View Farm mapping project, was utilized to correlate the mean high water elevation.

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It is noted that this elevation is slightly higher than the 0.63 feet that was determined for Grand View Farms which is located south of this project site and across MD Route 365.

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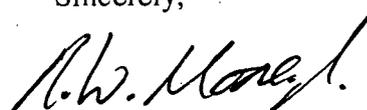
Therefore, it has been determined that all mapped Tidal Wetlands, which are located above the elevation of 0.639 (mean high water), are delineated as Private Tidal Wetlands. This certification of tidal

Edward M. Launay
December 4, 2006
Page 2

datum information and review of the attached plate has been undertaken in concert with staff from the Chesapeake Bay Critical Areas Commission and the Maryland Department of the Environment, Wetlands and Waterways Program.

If you have any questions or need additional information, please contact me directly.

Sincerely,



Doldon W. Moore, Jr.
Wetlands Administrator

Enc: ERI October 3, 2006 letter
August 14, 2006, plate with Approval Stamp

Cc: Gary Setzer, MDE (letter only)
Joe Kincade, MDE
Chris Clark, CAC

ERI

12/05/2006 12:00

4105483767



MARYLAND DEPARTMENT OF THE ENVIRONMENT

Water Management Administration

Nontidal Wetlands & Waterways Division

District Court/Multi-Service Center • 201 Baptist Street • Salisbury, MD 21801

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Robert L. Ehrlich, Jr.
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Deputy Secretary

November 30, 2006

Kelly Henry, Zoning Administrator
Worcester County
Department of Development, Review & Permitting
Government Center
One West Market St., Rm 1201
Snow Hill, Maryland 21863

Application Tracking #: 200666513
WMA #: 05-NT-2181
Project Description: Subdivision
Project Manager: Steve Dawson
(410) 713-3685

DEC 1 2006

Dear Ms. Henry:

Ed Launay of Environmental Resources, Inc. has requested that I contact you in reference to the proposed **Creekside at Public Landing** project. I will be on leave through the coming weeks and I am concerned that my absence might create some unwarranted delays in local approvals should they require a reference to the existing wetland locations on this property.

On October 27, 2006, I visited this site. During this visit I inspected areas of proposed activities potentially impacting wetlands and buffers that exist on the property. These were illustrated on the site plan submitted with the application for this project that we received in this office on October 17, 2006.

We are still in the review process for this project. However, at this time, based on this site visit, I can inform you that the wetland delineation submitted with this application appears to be essentially correct. The application is still pending and is not likely to receive final approval until after the first of the year. With final approval, all such site plans indicating a wetland delineation become formally accepted and the wetland boundary is likewise formally accepted.



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Kelly Henry, Zoning Administrator
Worcester County
Department of Development, Review & Permitting
Re: Tracking #200666513/05-NT-2181

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If you have any questions please feel free to contact me, either at the above number, or on my cell phone at 443-463-9475.

Sincerely,



Steve Dawson
Chief, Eastern Region
Nontidal Wetlands & Waterways Division

cc: Ed Lamy - ERI

200666513a.LTR

**DELINEATION OF AREAS OF PRIVATE TIDAL WETLANDS
AT CREEKSIDE AT PUBLIC LANDING
TAX MAP 65, PARCEL 48
SECOND ELECTION DISTRICT, WORCESTER COUNTY,
MARYLAND**

October 2, 2006

Prepared for:

PUBLIC LANDING, LLC
P.O. Box 940
Ocean City, MD 21842
410-879-7950

Prepared by:

Edward M. Launay, Professional Wetland Scientist No. 875
ENVIRONMENTAL RESOURCES, INC.
100 East Main Street, Suite 500
Salisbury, MD 21801
410-548-5320

ERI #X0417-0005

RECEIVED

OCT 9 2006

CRITICAL AREA COMMISSION

INTRODUCTION

Creekside at Public Landing consists of 234.97 acres of land which includes upland agricultural fields, forested uplands, forested nontidal wetlands and tidal wetland salt marshes. The property is of Parcel 48, Tax Map 65 in the Second Election District of Worcester County, Maryland. Currently the owners of Creekside at Public Landing (Public Landing, LLC) seek development approvals for a residential subdivision. A total of 38.93 acres of the site consists of salt marshes and subaqueous lands classified by the State of Maryland as tidal wetlands or waters. This tidal wetland area adjoins Scarboro Creek located on the north side of the property. A wide expanse of tidal wetlands is located on the east portion of the site borders the Chincoteague Bay located further to the east of the property. Tidal wetlands are wetlands identified on tidal wetland maps promulgated by the Maryland Department of Natural Resources. In the case of this project, the landward limits of tidal wetlands were flagged and surveyed by Environmental Resources, Inc. (ERI).

Although the deeds for the property indicate ownership of tidal salt marsh areas and tidal waters to the center of Scarboro Creek with taxes being assessed by the county and paid by the owners on said lands, the State of Maryland has exerted riparian claim over the tidal wetland or underwater land line lying below the elevation of local mean high water (State tidal wetlands).

Mean high water is defined as the arithmetic mean of high water highs of a mixed tide cycle observed over a specific 19-year metonic cycle (Tidal Datum Epoch). Vegetated salt marshes can be found at elevations both significantly above and below local mean high water elevations.

~~However, the tidal wetland salt marshes at Creekside at Public Landing were found to be very flat~~
expanses exhibiting a very narrow range of elevations. Initial site evaluation by ERI found vegetation types and physical conditions which, on a preliminary basis, indicated that almost all of the tidal wetlands on the north side of this property may be above the local mean high water elevation. Wetlands occupying the east side of the property also had vegetation types characteristic

of above mean high water conditions; however, past disturbance of this wetland for hunting and mosquito control have resulted in the creation of mud flats, shallow ponds and cuts created by machine ruts. Where these disturbances are substantively above the marsh, these areas may no longer be private tidal wetlands.

The owners of Creekside at Public Landing wish to use portions of tidal wetland salt marshes for certain density calculations being made in their application for subdivision of the property. Only those tidal wetlands that lie above the local mean high water line are privately owned (private tidal wetlands). Only private tidal wetlands are permitted to be counted for density calculations under current Worcester County Code.

ERI and other consultants for the project have identified a 24.70-acre area of tidal wetlands which, based upon various vegetative and physical characteristics, clearly lies above the elevation of local mean high water. This report details the various environmental studies and analysis which have been performed in order to verify the subject 24.70-acre tidal wetland area as private wetlands lying above the mark of mean high water. This effort included determining the local mean high water elevation using a National Oceanic and Atmospheric Administration (NOAA) Tidal Wetland Benchmark located at nearby Public Landing. Standard surveying differential leveling methods were utilized to determine elevations within the 24.70-acre private wetlands using the NOAA Tidal Benchmark Datum for Public Landing. Adjustments for the Tidal Wetland Benchmark to the topographic survey shown on the plans provided herein, which are based upon the North American Vertical Datum (NAVD88), are provided in this report.

Hydroperiod and salinity are perhaps the two most important factors in determining the zonation of various salt marsh vegetative communities. Various species of salt marsh vegetation have known and well understood relationships to various tide elevations, including the mark of mean high water. Therefore, an analysis was performed looking at the various types of salt marsh vegetation found within the private wetlands and its surroundings.

Based upon this understanding and preliminary evaluation of on-site tide elevation data, the preliminary identification of the 24.70-acre area of private wetlands was initially delineated by

focusing on vegetation types well understood to be above the mark of mean high water exemplified by high marsh areas vegetated with saltgrass (*Distichlis spicata*), salt meadow cordgrass (*Spartina patens*) and high tide bush (*Iva frutescens*). After preliminary evaluation, areas of short form, low vigor salt marsh cordgrass (*Spartina alterniflora*) were also believed to be private tidal wetlands.

Further verification of the extent of private wetlands positioned above the local mean high water line was then made through detailed elevation studies of vegetative communities. Marshes were surveyed to determine their elevation above the mean high water elevation provided by NOAA's Public Landing Tidal Benchmark. Study transects were then established on typical tidal wetland areas along Scarboro Creek in order to characterize the north and east tidal wetland areas..

In 2004, ERI did conduct a short term tide study for the Grand View Farms project to confirm the validity of the NOAA Tidal Benchmark of Public Landing. The Grand View Farm project is located to the south of this site opposite MD Route 365. The results of this study confirmed the NOAA benchmark. Results of that study are provided in *Exhibit C* of this report.

PROJECT DATUM

The National Ocean Service (NOS) publishes tidal benchmark information for a large number of waterfront locations. The relationships of the national geologic vertical datum of 1929 (ngvd 29) and North American Vertical Datum of 1988 (navd 1988) to various water levels/tidal datums such as mean low low water, mean high water and mean tide level is sometimes provided. When this is not the case, Tidal Benchmark data provides tidal elevations for the local area. NOS also provides local tide predictions which are based upon making corrections to regional tide monitoring stations. The monitoring stations used for making corrections are referred to herein as control stations or reference stations and generally have established relationships to ngvd 1929 and navd 1988 datums.

Creekside at Public Landing is located in close proximity to NOAA Tidal Wetland Benchmark Station 8570649, Public Landing, Maryland. The primary benchmark was used in this study which is a bronze disk stamped 0649A 1985. The disk is set flush in the bottom concrete step on the south side of the Driscoll residence 37.3 ft. NW of a 24" diameter cedar tree and 25.3 ft. NE of the

centerline of Public Landing Road (MD Route 365). The elevation of disk 0649A.1985 is 10.36 ft. (3.158m) above local mean low low water. NOAA provides the following tidal benchmark data for Public Landing.

Mean high water	0.639 ft.	0.192m
Mean sea level	0.377 ft.	0.115m
Mean tide level	0.364 ft.	0.111m
Mean low water	0.102 ft.	0.031m
Mean low low water	0.000 ft.	0.000m

The tidal benchmark sheet published for Public Landing by NOAA is provided by *Exhibit A*. The topographic and property line survey plan for Creekside at Public Landing illustrating the area of private tidal wetlands entitled "Limits of Private Tidal Wetlands" Creekside at Public Landing dated August 14, 2006, was prepared by F. Douglas Jones Surveying Associates, Salisbury, MD (*Exhibit E*). The surveyor utilized a GPS-determined vertical benchmark determined by a National Geodetic Survey (NGS) OPUS solution on the North American Vertical Datum of 1988 (navd 88). The project benchmark established was an iron rod with a cap set in the center of the farm lane opposite the existing barn structure, elevation 17.38 feet. This benchmark was also tied into State Highway Administration Benchmark 18 WDK R.

The elevation of NOAA Tidal Benchmark 064A 1985 was determined to be 9.64 feet based on the navd 88 datum. Therefore, in order to correct elevations shown on the survey plan relative to the NOAA tidal benchmark, 0.72 feet must be added. However, all data and discussions in the report are based upon the NOAA tidal benchmark datum of mean low low water.

DATA COLLECTION

IN 2004, ERI installed a tide monitoring station in Pawpaw Creek for the nearby Grand View Farms project. The purpose was to confirm the mean high water elevation established by NOAA for Public Landing. A Global Water WL-14 Water Logger was installed in accordance with manufacturer's recommendations. The logger was set for continuous readings at 15-minute intervals. The elevation of the water logger was established through standard survey differential leveling methods based upon

the NOAA Tidal Benchmark for Public Landing. Raw collected data was then adjusted to the NOAA tidal benchmark datum. The correction to adjust raw data (water elevation above probe) to the NOAA tidal benchmark mean low low water datum is a subtraction of 0.95 foot.

The plans for Creekside at Public Landing provided herein illustrate transect data points where vegetation was sampled and elevations were established (*Exhibit E*). These locations were located with a Trimble Model XRS-PRO submeter accuracy geographic position system. However, all transect data point elevations were determined by standard survey differential leveling based upon vertical survey controls established throughout the property based upon the NOAA Tidal Benchmark for Public Landing.

The results of the transect study at Creekside at Public Landing (*Table A*) do reflect a narrow range of the tide marsh from 0.85 to 1.31 feet. The average of all transect spot elevations is 1.07 feet. The tidal wetland area studied had a 40 percent mix of salt meadow cordgrass (*Spartina patens*) interspersed with high tide bush and 60 percent mix of low vigor salt marsh cordgrass (*Spartina alterniflora*). Photographs of the North Transect Area are provided as *Exhibit D*.

ERI did identify portions of the marsh on the east side of the site which have been largely cut up by hunting and mosquito ditching activities. The Maryland tidal wetland maps clearly show evidence of ruts and marks within the marsh caused by rotary ditching equipment. Historic aerial photographs from 1963 show much less marsh disturbance. Given the extent of marsh disturbance and the active waterfowl hunting which occurred on and adjacent to this property, I also suspect that dynamiting of the marsh was done to increase open water. Tidal marsh areas which were substantively disturbed, although partially vegetated, have a significant percentage of standing water. Due to the extent of intermixed marsh and open water created due manmade disturbance on the eastern marsh, ERI determined these areas to be State tidal wetlands.

As part of the determination of the Limits of Private Tidal Wetlands, ERI conducted a GPS shoreline survey of Scarboro Creek. Along Scarboro Creek, private wetlands extend to the shoreline edge for the most part where the marsh is much less disturbed. The limits of private tidal wetlands were partially flagged and surveyed and followed by desktop review of aerial photography. ERI then had

TABLE A

**TIDAL WETLAND TRANSECT DATA
SCARBORO CREEK**

Key to Vegetation: Sa - *Spartina alterniflora*
 Sp - *Spartina patens*
 Ds - *Distichlis spicata*
 Htb - *Iva frutescens*
 Mf - *Pluchea camphorata*

Transect Point	Elevation Above NOAA Local Mean Low Low Water	Transect Point Description
EAST	MARSH	TRANSECT (SCARBORO CREEK)
a	1.31	Sp and Htb near nontidal woods line
b	1.21	Mixed Sp and Sa (mostly Sp, some narrow leaf cattail)
c	.90	Mixed Sa and Sp (mostly Sp)
d	.90	Low vigor Sa near ditch
e	.85	Low vigor Sa, ponded depression
f	.92	Low vigor Sa
g	.90	Low vigor Sa, few Salicornia
h	1.05	Sp near HtB/Phragmites edge
i	1.01	Mixed Sa and Sp
j	.90	Low vigor Sa
k	.90	Low vigor Sa
l	.93	Sa, 15' off mosquito ditch edge
m	.94	Sa mosquito ditch edge
NORTH	MARSH	TRANSECT (SCARBORO CREEK)
n	1.17	Sp, Htb near woods line
o	1.31	Sp, Htb

Transect Point	Elevation Above NOAA Local Mean Low Low Water	Transect Point Description
p	1.13	Sp, few Htb
q	1.05	Mixed Sp and Sa (mostly Sp)
r	1.05	Low vigor Sa
s	1.02	Low vigor Sa
t	1.52	Mixed Sa and Sp
u	1.04	Low vigor Sa
v	1.04	Low vigor Sa
w	1.04	Mixed Sa and Sp
x	1.24	Sp, 15' from shoreline
y	1.36	Sp at shoreline edge
z	1.05	Low vigor Sa
aa	1.06	Low vigor Sa
bb	1.20	Mixed Sa, Sp, HtB

S:\Projects 400 to 499\0417-0005 (ScarboroCreek) Creekside@PublicLanding\TransectData.417-0005.wpd

a preliminary consultation with MDE officials after which additional marsh was delineated as State wetlands.

NOAA has established a mean high water elevation at this site of 0.639 foot. The study transects *Table A* clearly demonstrate that the area of private tidal wetlands lies relatively well above this elevation by approximately 0.43 foot on average.

The tidal datum and tidal cycles are a local phenomenon because of numerous local topographic forces shaping tides. In tidal estuaries, factors such as the Coriolis effect, increasing distance from the ocean, channel geometry and decreasing depth result in differences in tidal datum sometimes even within the same general vicinity.

In his publication, *Water Boundaries*, George Cole, P.L.S., provides methods for establishing tidal datum using tide monitoring stations. The National Ocean Service (NOS) of NOAA is the primary federal agency associated with the collection of tidal data. NOS maintains a network of permanent control tide stations. NOS has an expanded network of subordinate tide stations established in connection with monitoring and/or hydrogeographic studies. NOS in many cases provides benchmark information to relate local tide data to NGVD 1929 or other datums.

Information on local tide ranges is provided by NOAA in their publication entitled, *Tide Tables 2003, High & Low Water Predictions, East Coast of North and South America*. This information is available via the internet. NOS also provides data on observed tide elevations via the internet. In our analysis this allowed us to verify date and time of occurrence for predicted mean high water events against actual conditions at the reference station.

The NOAA *Tide Tables* specify the use of the Sandy Hook, NJ, Reference Station for waters in the vicinity of Creekside at Public Landing. The Public Landing, MD, subordinate station is listed in the *Tide Tables*. General tide station data and corrections for local subordinate stations are provided by the *Tide Tables* (see *Exhibit B*).

In the case of Public Landing, NOAA has specifically determined the mean high water elevation to be 0.639 foot above local mean low low water. ERI's transect study of the private tidal wetlands at Creekside at Public Landing determined an average salt marsh elevation of 1.07 feet above local mean low low water. The result was similar for the Pawpaw Creek tidal wetlands studies at Grand View Farms, 1.05 feet

In 2004, ERI provided backup to the NOAA mean high water determination by collecting tide elevation data in Pawpaw Creek. We identified ten occasions during July and August where actual mean high water elevations occurred at Sandy Hook, NJ. Using our collected information, we determined the average of these mean high water events. This information is provided in *Table C*. The average mean high water elevation ERI observed over this period was 0.84 foot. This confirms the NOAA determination and ERI determination as to the extent of private wetlands on this project being within 0.2 foot. This is good correlation as tides ran somewhat higher than predicted during the period as charted by NOAA. In addition, no attempt to correct for weather over this short term study was done.

CONCLUSION

ERI and F. Douglas Jones Surveying Associates and Environmental Resources, Inc., utilized the NOAA tidal benchmark at Public Landing to determine elevations of the tidal wetlands at Creekside at Public Landing above local mean low water. All portions of the tidal wetlands designated as private tidal wetlands by *Exhibit E* lie above the elevation determined by NOAA for mean high water, the exception being manmade mosquito control ditches which are considered as part of the tidal wetland.

ERI also evaluated the vegetation types with the tidal marsh delineated as private tidal wetlands. The predominant marsh vegetation found was a 40 percent mix of salt meadow cordgrass and 60 percent mix of low vigor salt marsh cordgrass which are generally recognized to occur above mean high water.

In 2004, ERI conducted a short term study recording tide elevations in nearby Pawpaw Creek. The results of this effort generally verified NOAA's determination of 0.639 foot above mean low low water as the mean high water elevation.

The original 234.97-acre site contains 38.93 acres of tidal wetlands and waters. A total of 14.23 acres of the site have been determined to be waters and wetlands lying below the State tidal local mean high water elevation. The remaining 24.70 acres are private tidal wetlands which will be retained as part of the Creekside at Public Landing project.

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EXHIBIT A
NOAA BENCHMARK SHEET

U.S. DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
National Ocean Service

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Station ID: 8570649
Name: PUBLIC LANDING
MARYLAND

PUBLICATION DATE: 05/23/2003

NOAA Chart: 12211
USGS Quad: PUBLIC LANDING

Latitude: 38° 8.9' N
Longitude: 75° 17.1' W

To reach the tidal bench marks from the intersection of U.S. Highway 113 and State Highway 365 in Snowhill, proceed east on State Highway 365 for 8.5 km (5.3 mi) to the public landing. The bench marks are near the county pier. The tide gage and staff were on the east end and south side of the pier.

T I D A L B E N C H M A R K S

PRIMARY BENCH MARK STAMPING: 0649 A 1985
DESIGNATION: 857 0649 A

MONUMENTATION: Tidal Station disk **VM#:** 3034
AGENCY: National Ocean Service (NOS) **PID:**
SETTING CLASSIFICATION: Concrete step

The primary bench mark is a disk set flush in the bottom concrete step on the south side of the Driscoll residence, 11.37 m (37.3 ft) SE of the extended centerline of Bayside Road, 8.32 m (27.3 ft) NW of a 0.61 m (2.0 ft) diameter cedar tree, and 7.71 m (25.3 ft) NE of the centerline of Route 365.

BENCH MARK STAMPING: 18 WDK 1963 RESET 1976
DESIGNATION: 857 0649 18 WDK RES 1976

MONUMENTATION: Triangulation Station disk **VM#:** 3033
AGENCY: US Geological Survey (USGS) **PID:**
SETTING CLASSIFICATION: Base of abandoned pole

The bench mark is a disk set flush in the 1 m (2 ft) square concrete base of an abandoned pole, 47 m (153 ft) NW of the centerline of Bayside Road, 6.61 m (21.7 ft) SW of the centerline of Route 365, and 1.22 m (4.0 ft) east of power pole #163.

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National Oceanic and Atmospheric Administration
National Ocean Service

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Station ID: 8570649
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MARYLAND
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PUBLICATION DATE: 05/23/2003

Latitude: 38° 8.9' N
Longitude: 75° 17.1' W

T I D A L B E N C H M A R K S

BENCH MARK STAMPING: 0649 B 1985
DESIGNATION: 857 0649 B

MONUMENTATION: Tidal Station disk
AGENCY: National Ocean Service (NOS) VM#: 3035
SETTING CLASSIFICATION: Concrete pedestal PID:

The bench mark is a disk set flush in the top of a concrete pedestal of an abandoned fuel storage tank, 13 m (43 ft) NW of the centerline of Bayside Road, 8 m (26 ft) SW of the centerline of State Highway 365, and 5 m (18 ft) NE of the SE corner of a 2-story frame dwelling.

BENCH MARK STAMPING: 0649 C 1985
DESIGNATION: 857 0649 C

MONUMENTATION: Tidal Station disk
AGENCY: National Ocean Service (NOS) VM#: 3036
SETTING CLASSIFICATION: Stainless steel rod PID:

The bench mark is a disk located 27.74 m (91.0 ft) NW of the centerline of a paved road, 11.89 m (39.0 ft) NE of the centerline of State Highway 365, and 0.70 m (2.3 ft) SW of power pole #120 with witness post. The bench mark is set 15 cm (0.5 ft) below the ground, crimped to the top of a stainless steel rod driven an unspecified depth, and encased in a 5-inch PVC pipe and concrete kickblock.

U.S. DEPARTMENT OF COMMERCE
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National Ocean Service

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Station ID: 8570649
Name: PUBLIC LANDING
MARYLAND

PUBLICATION DATE: 05/23/2003

NOAA Chart: 12211
USGS Quad: PUBLIC LANDINGLatitude: 38° 8.9' N
Longitude: 75° 17.1' W

T I D A L B E N C H M A R K S

BENCH MARK STAMPING: 0649 D 1985
DESIGNATION: 857 0649 DMONUMENTATION: Tidal Station disk VM#: 3037
AGENCY: National Ocean Service (NOS) PID:
SETTING CLASSIFICATION: Stainless steel rod

The bench mark is a disk located 52.27 m (171.5 ft) NW of power pole #118, 47.15 m (154.7 ft) SE of power pole #117, 31.70 m (104.0 ft) north of the north corner of a 2-story frame dwelling (Hamaker's residence), and 10.52 m (34.5 ft) NE of the centerline of Route 365. The bench mark is set 15 cm (0.5 ft) below the surface, crimped to the top of a stainless steel rod driven 9.8 m (32 ft), and encased in a 5-inch PVC pipe and concrete kickblock.

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Latitude: 38° 8.9' N
Longitude: 75° 17.1' W

T I D A L D A T U M S

Tidal datums at PUBLIC LANDING based on:

LENGTH OF SERIES: 3 MONTHS
TIME PERIOD: August 1985 - October 1985
TIDAL EPOCH: 1983-2001
CONTROL TIDE STATION: 8558690 INDIAN RIVER INLET

Elevations of tidal datums referred to Mean Lower Low Water (MLLW), in METERS:

MEAN HIGHER HIGH WATER (MHHW)	=	0.216	
MEAN HIGH WATER (MHW)	=	0.192	= 0.63'
MEAN SEA LEVEL (MSL)	=	0.115	
MEAN TIDE LEVEL (MTL)	=	0.111	
MEAN LOW WATER (MLW)	=	0.031	= 0.10'
MEAN LOWER LOW WATER (MLLW)	=	0.000	= 0.00'

Bench Mark Elevation Information

In METERS above:

Stamping or Designation	MLLW	MHW	
<u>0649 A 1985</u>			
18 WDK 1963 RESET 1976	<i>10.36' above mllw</i> = 3.158	2.966	= 9.73' above m.h.w.
0649 B 1985	2.886	2.760	
0649 C 1985	3.513	2.694	
0649 D 1985	4.007	3.321	
		3.815	

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Station ID: 8570649
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D E F I N I T I O N S

Mean Sea Level (MSL) is a tidal datum determined over a 19-year National Tidal Datum Epoch. It pertains to local mean sea level and should not be confused with the fixed datums of North American Vertical Datum of 1988 (NAVD 88).

NGVD 29 is a fixed datum adopted as a national standard geodetic reference for heights but is now considered superseded. NGVD 29 is sometimes referred to as Sea Level Datum of 1929 or as Mean Sea Level on some early issues of Geological Survey Topographic Quads. NGVD 29 was originally derived from a general adjustment of the first-order leveling networks of the U.S. and Canada after holding mean sea level observed at 26 long term tide stations as fixed. Numerous local and wide-spread adjustments have been made since establishment in 1929. Bench mark elevations relative to NGVD 29 are available from the National Geodetic Survey (NGS) data base via the World Wide Web at <http://www.ngs.noaa.gov>.

NAVD 88 is a fixed datum derived from a simultaneous, least squares, minimum constraint adjustment of Canadian/Mexican/United States leveling observations. Local mean sea level observed at Father Point/Rimouski, Canada was held fixed as the single initial constraint. NAVD 88 replaces NGVD 29 as the national standard geodetic reference for heights. Bench mark elevations relative to NAVD 88 are available from NGS through the World Wide Web at <http://www.ngs.noaa.gov>.

NGVD 29 and NAVD 88 are fixed geodetic datums whose elevation relationships to local MSL and other tidal datums may not be consistent from one location to another.

The Vertical Mark Number (VM#) and PID# shown on the bench mark sheet are unique identifiers for bench marks in the tidal and geodetic databases, respectively. Each bench mark in either database has a single, unique VM# and/or PID# assigned. Where both VM# and PID# are indicated, both tidal and geodetic elevations are available for the bench mark listed.

The NAVD 88 elevation is shown on the Elevations of Tidal Datums Table Referred to MLLW only when two or more of the bench marks listed have NAVD 88 elevations. The NAVD 88 elevation relationship shown in the table is derived from an average of several bench mark elevations relative to tide station datum. As a result of this averaging, NAVD 88 bench mark elevations computed indirectly from the tidal datums elevation table may differ slightly from NAVD 88 elevations listed for each bench mark in the NGS database.

EXHIBIT B
TIDE TABLES

TABLE 2 - TIDAL DIFFERENCES AND OTHER CONSTANTS

No.	PLACE	POSITION		DIFFERENCES				RANGES		Mean Tide Level
		Latitude	Longitude	Time		Height		Mean	Spring	
				High Water	Low Water	High Water	Low Water			
	DELAWARE, outer coast-cont. Time meridian, 75° W	North	West	h	m	ft	ft	ft	ft	ft
	<i>Indian River-cont.</i>			on Sandy Hook, p.68						
2127	Oak Orchard	38° 36'	75° 10'	+2 43	+3 13	*0.19	*0.19	0.9	1.1	0.5
2129	Possum Point	38° 35'	75° 16'	+3 08	+4 02	*0.21	*0.20	1.0	1.2	0.5
2131	Rehoboth Bay	---	---	---	---	---	---	0.5	0.6	0.2
2133	Fenwick Island Light	38° 27'	75° 03'	-0 14	-0 17	*0.80	*0.79	3.7	4.5	2.0
	MARYLAND, outer coast									
2135	Ocean City (fishing pier)	38° 20'	75° 05'	-0 23	-0 27	*0.75	*0.75	3.5	4.2	1.9
2137	Ocean City (Isle of Wight Bay)	38° 20'	75° 05'	-0 15	-0 23	*0.47	*0.45	2.2	2.7	1.2
2139	North Beach Coast Guard Station	38° 12'	75° 09'	-0 29	-0 27	*0.73	*0.70	3.4	4.1	1.8
	MARYLAND end VIRGINIA Chincoteague Bay									
2141	Assateague Beech, Toms Cove	37° 52'	75° 22'	+0 05	+0 18	*0.77	*0.75	3.6	4.4	2.0
2143	Harbor of Refuge	37° 54'	75° 24'	+0 06	+0 08	*0.55	*0.54	2.5	3.0	1.4
2145	Chincoteague Channel (south end)	37° 54'	75° 24'	+0 14	+0 19	*0.47	*0.45	2.2	2.6	1.2
2147	Bogues Bay, Chincoteague Inlet	37° 53'	75° 30'	+0 37	+0 59	*0.64	*0.65	3.0	3.6	1.6
2149	Wishart Point, Bogues Bay	37° 53'	75° 30'	+0 19	+0 44	*0.55	*0.55	2.6	3.1	1.4
2151	Chincoteague Island, USCG Station	37° 56'	75° 23'	+0 31	+0 43	*0.35	*0.35	1.6	1.9	0.9
2153	Chincoteague Island, Lewis Creek	37° 56'	75° 22'	+0 51	+1 08	*0.28	*0.28	1.3	1.6	0.8
2155	Chincoteague Island, Oyster Bay	37° 56'	75° 21'	+1 17	+1 35	*0.32	*0.32	1.5	1.8	0.9
2157	Chincoteague Island, Blake Cove	37° 57'	75° 21'	+1 24	+2 02	*0.18	*0.18	0.9	1.1	0.5
2159	Franklin City	38° 00'	75° 23'	+1 53	+2 30	*0.14	*0.14	0.7	0.8	0.4
2161	George Island Landing	38° 02'	75° 22'	+2 52	+3 04	*0.13	*0.15	0.6	0.7	0.3
2163	Assacorkin Island	38° 04'	75° 19'	+3 32	+3 44	*0.10	*0.10	0.4	0.5	0.2
2165	Public Landing	38° 09'	75° 17'	+4 57	+5 29	*0.09	*0.10	0.4	0.5	0.2
	VIRGINIA, outer coast									
2167	Wallops Island	37° 50'	75° 29'	-0 24	-0 30	*0.76	*0.75	3.6	4.4	1.9
2169	Gargathy Neck	37° 47'	75° 34'	+1 04	+0 58	*0.63	*0.65	3.0	3.6	1.6
2171	Metompkin Inlet	37° 40'	75° 36'	+0 34	+0 14	*0.78	*0.75	3.6	4.4	2.0
2173	Folly Creek, Metompkin Inlet	37° 42'	75° 38'	+0 57	+0 43	*0.69	*0.70	3.3	4.0	1.8
2175	Wachapreague Inlet (inside)	37° 35'	75° 37'	+0 08	+0 05	*0.84	*0.85	3.9	4.7	2.1
2177	Quinby Inlet entrance	37° 28'	75° 40'	+0 03	-0 10	*0.86	*0.85	4.0	4.8	2.2
2179	The Swash, south end	37° 30'	75° 40'	+0 18	+0 16	*0.84	*0.85	3.9	4.7	2.1
2181	Great Machipongo Inlet (inside)	37° 24'	75° 43'	+0 35	+0 25	*0.93	*0.85	3.9	4.7	2.1
2183	Upshur Neck, south end	37° 28'	75° 48'	+0 49	+0 54	*0.95	*0.95	4.4	5.3	2.4
2185	Sand Shoal Inlet (Coast Guard Station)	37° 18'	75° 47'	+0 07	-0 09	*0.88	*0.85	4.1	4.9	2.2
2187	Ship Shoal Inlet	37° 13'	75° 48'	+0 25	+0 11	*0.86	*0.85	4.0	4.8	2.2
2189	Smith Island (Coast Guard Station)	37° 07'	75° 55'	+0 22	+1 01	*0.75	*0.75	3.5	4.2	1.9
	Chesapeake Bay, Eastern Shore									
	<i>on Hampton Roads, p.92</i>									
2191	Fishermans Island	37° 06'	75° 59'	-0 43	-0 55	*1.23	*1.25	3.0	3.6	1.7
2193	Kiptopeke Beech	37° 10'	75° 59'	-0 39	-0 30	*1.08	*1.08	2.7	3.2	1.5
2195	Old Plantation Flats	37° 14'	76° 03'	-0 23	-0 10	*0.97	*1.00	2.4	2.9	1.3
2197	Cape Charles Harbor	37° 16'	76° 01'	-0 11	+0 01	*0.94	*0.92	2.3	2.8	1.3
2199	Nassawadox Creek	37° 28'	75° 58'	+1 00	+0 53	*0.73	*0.75	1.8	2.2	1.0
2201	Gaskins Point, Occoanock Creek	37° 33'	75° 55'	+1 36	+2 08	*0.69	*0.67	1.7	2.0	0.9
2203	Pungoteague Creek	37° 40'	75° 50'	+2 26	+2 42	*0.69	*0.67	1.7	2.0	0.9
2205	Onancock, Onancock Creek	37° 43'	75° 45'	+2 56	+3 14	*0.73	*0.75	1.8	2.2	1.0
2207	Chesconess Creek, Schooner Bay	37° 46'	75° 46'	+2 47	+2 59	*0.82	*1.25	2.0	2.3	1.1
2209	Watts Island	37° 48'	75° 54'	+3 03	+3 07	*0.65	*0.67	1.6	1.9	0.9
2211	Tengler Sound Light	37° 47'	75° 58'	+2 55	+2 53	*0.66	*0.67	1.6	1.9	0.9
2213	Muddy Creek Entrance	37° 51'	75° 40'	+3 18	+3 48	*0.88	*0.92	2.2	2.6	1.2
2215	Guard Shore	37° 51'	75° 42'	+3 07	+3 42	*0.92	*0.92	2.3	2.7	1.3
	MARYLAND Chesapeake Bay, Eastern Shore									
2217	Ape Hole Creek, Pocomoke Sound	37° 58'	75° 49'	+3 28	+3 53	*0.92	*0.92	2.3	2.8	1.2
	<i>Pocomoke River</i>									
2219	Shelldown	37° 59'	75° 38'	+3 33	+4 11	*0.97	*1.00	2.4	2.9	1.3
2221	Pocomoke City	38° 05'	75° 34'	+5 50	+6 10	*0.66	*0.82	1.6	2.0	0.9
2223	Snowhill, city park	38° 10'	75° 24'	+7 36	+7 48	*0.77	*0.75	1.9	2.3	1.0
2225	Jenes Island Light	37° 58'	75° 55'	+3 55	+3 55	*0.73	*0.75	1.8	2.2	1.0
2227	Crisfield, Little Annemessex River	37° 59'	75° 52'	+3 51	+4 00	*0.81	*0.83	2.0	2.4	1.1
2229	Long Point, Big Annemessex River	38° 03'	75° 48'	+4 20	+4 41	*0.85	*0.83	2.1	2.5	1.1
2231	Teeque Creek, Menokin River	38° 06'	75° 50'	+4 39	+5 00	*0.85	*0.83	2.1	2.5	1.1
2233	Ewell, Smith Island	38° 00'	76° 02'	+4 00	+4 26	*0.65	*0.67	1.6	1.9	0.9
2235	Solomons Lump Light	38° 03'	76° 01'	+4 17	+4 20	*0.67	*0.67	1.7	2.0	0.9
2237	Holland Island Bar Light	38° 04'	76° 06'	+4 17	+4 25	*0.58	*0.58	1.4	1.7	0.8
2239	Chance	38° 10'	75° 57'	+4 41	+4 53	*0.88	*0.92	2.2	2.6	1.2
2241	Sharkin Shoal Light	38° 12'	75° 59'	+4 47	+5 01	*0.88	*0.88	2.2	2.6	1.2
2243	Great Shoals Light, Monie Bay	38° 13'	75° 53'	+5 01	+5 17	*0.92	*0.92	2.3	2.8	1.3
	<i>Wicomico River</i>									
2245	Whitehaven	38° 16'	75° 47'	+5 28	+5 42	*0.96	*0.96	2.4	2.9	1.3
2247	Salisbury	38° 22'	75° 36'	+6 22	+6 19	*1.24	*1.25	3.0	3.6	1.7

Endnotes can be found at the end of table 2.

EXHIBIT C

PAWPAW CREEK TIDE STUDY

Exhibit C

TIDE STATION RESULTS FOR MEAN HIGH WATER EVENTS AS PREDICTED BY NOAA

NOTE: Predicted mean high water events at Public Landing are based upon corrections to NOAA's Sandy Hook Control Station (*Exhibit B*). Predicted mean high water events at Sandy Hook are 4.7 to 4.9 feet above mean low low water. Ten events were predicted during July and August 2004. Actual water data recorded by NOAA was reviewed to determine any significant departure from NOAA predictions (*Exhibit D*). Tides generally ran somewhat higher than predicted over the study period.

<u>Date</u>	<u>Time at Public Landing</u>	Height of Tide NOAA Public Landing Tidal Benchmark <u>Mean Low Low Water Datum</u>
7/23/2004	3:45 A.M.	0.92 foot
7/23/2004	4:15 P.M.	0.86 foot
7/24/2004	4:00 A.M.	0.77 foot
7/30/2004	10:30 A.M.	0.87 foot
8/7/2004	5:30 P.M.	1.21 feet
8/8/2004	6:30 P.M.	0.77 foot
8/9/2004	8:30 P.M.	0.44 foot
8/10/2004	9:15 P.M.	0.65 foot
8/17/2004	12:15 P.M.	0.93 foot
8/18/2004	1:45 A.M.	<u>0.96 foot</u>
	TOTAL	8.38 feet

Divided by 10 = 0.84 foot average mean high water elevation July/August

EXHIBIT D
NORTH MARSH TRANSECT PHOTOGRAPHS



DATA COLLECTION



VIEW OF *S. ALTERNIFLORA* APPROACHING CREEK



VIEW OF HIGH MARSH SOUTH TOWARD POINT
N 40



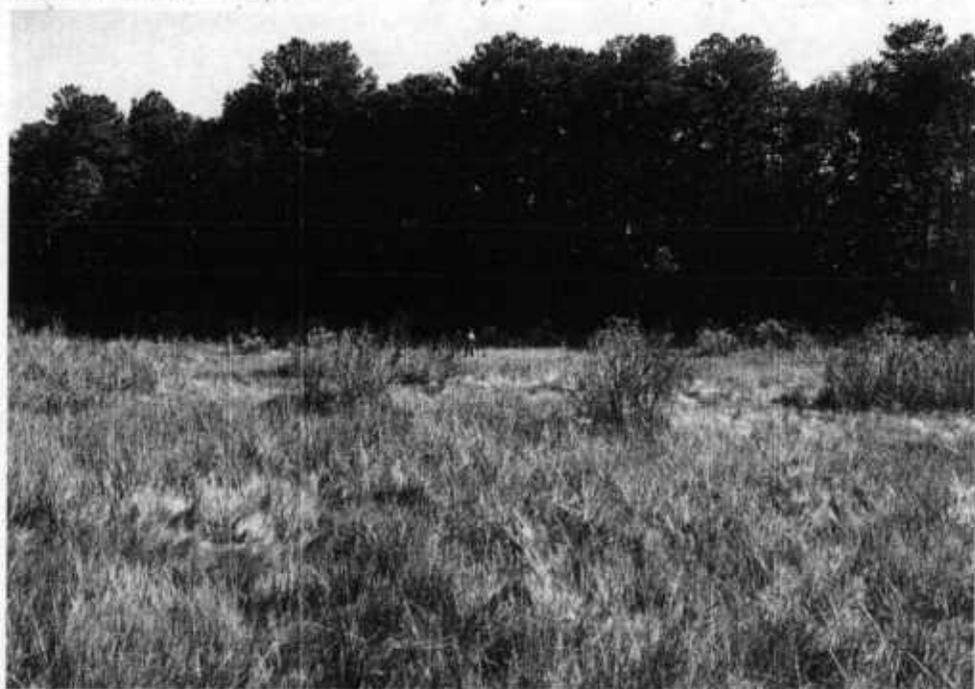
MIXED *S. ALTERNIFLORA* & *S. PATENS*
VIEW WEST PANTS AA & BB



VIEW OF S. PATENS FRINGE & IVA ALONG CREEK LOOKING NORTH.



VIEW OF S. PATENS ALONG CREEK
EDGE POINTS X $\frac{1}{2}$ Y



VIEW SOUTH FROM POINT W ALONG TRANSECT

EXHIBIT E
LIMITS OF PRIVATE TIDAL WETLANDS PLAN
(provided attached)

CREEKSIDE AT PUBLIC LANDING

CONSTRUCTION DRAWINGS AND STORM WATER MANAGEMENT (SWM) PLANS

PARCEL 48, TAX MAP 65

SECOND TAX DISTRICT, PUBLIC LANDING, WORCESTER COUNTY, MARYLAND

GENERAL NOTES:

- ALL WORK REQUIRED BY THESE DOCUMENTS (DRAWINGS AND SPECIFICATIONS) SHALL BE NEW. WHEREVER THE WORD "PROPOSED" IS USED, IT IS CONSIDERED INTERCHANGEABLE WITH THE WORD "NEW" AND IS INCLUDED IN THE REQUIRED WORK.
- ALL ELEVATIONS, TOPOGRAPHY AND ALIGNMENTS SHOWN ARE BASED UPON THE PRELIMINARY PLAT PREPARED BY F. DOUGLAS JONES SURVEYING ASSOCIATES, DATED 05/27/2005. THE ENGINEER DOES NOT WARRANT THAT THIS INFORMATION IS ENTIRELY CORRECT. THE CONTRACTOR SHALL EXAMINE A COPY OF SAID PLAN(S) AND VISIT THE SITE IN ORDER TO DETERMINE, TO HIS SATISFACTION, THE QUANTITIES OF WORK REQUIRED TO BE PERFORMED. UNLESS OTHERWISE NOTED, ALL ELEVATIONS FOR GRAVITY, STORM DRAIN PIPES ARE INVERTS.
- THESE DRAWINGS SHOW INFORMATION REGARDING UNDERGROUND UTILITIES WHICH EXIST ALONG THE LINES OF WORK. THE LOCATION OF UTILITIES SHOWN HAS BEEN PROVIDED FROM THE BEST AVAILABLE RECORDS AND SHALL BE VERIFIED BY THE CONTRACTOR TO HIS SATISFACTION PRIOR TO CONSTRUCTION. THE OWNER SHALL BE GIVEN NOTIFICATION BY THE CONTRACTOR PRIOR TO TEST FITTING. THE OWNER AND ENGINEER DISCLAIM ANY RESPONSIBILITY FOR THE ACCURACY OR COMPLETENESS OF SAID INFORMATION. IF THE CONTRACTOR RELIES ON SAID INFORMATION, HE DOES SO AT HIS OWN RISK. THE GIVING OF THE INFORMATION ON THESE DRAWINGS DOES NOT RELIEVE THE CONTRACTOR OF HIS OBLIGATIONS TO SUPPORT AND PROTECT ALL EXISTING UTILITIES AND APPURTENANCES. SHOULD ANY EXISTING UTILITIES BE DAMAGED BY THE CONTRACTOR, THE CONTRACTOR SHALL REPAIR THE DAMAGE CAUSED, TO THE UTILITY OWNER'S SATISFACTION, AT THE CONTRACTOR'S EXPENSE.
- ALL MATERIALS AND METHODS OF CONSTRUCTION SHALL CONFORM TO THESE DRAWINGS AND SPECIFICATIONS, AND TO ALL APPLICABLE REQUIREMENTS OF WORCESTER COUNTY, WORCESTER COUNTY DEVELOPMENT REVIEW, WORCESTER COUNTY ENVIRONMENTAL PROGRAMS (WCEP), WORCESTER COUNTY WATER AND WASTEWATER SERVICES, WORCESTER COUNTY ROADS, MARYLAND STATE HIGHWAY ADMINISTRATION, MARYLAND DEPARTMENT OF THE ENVIRONMENT (MDE), MARYLAND DEPARTMENT OF NATURAL RESOURCES (DNR), THE ARMY CORP. OF ENGINEERS, THE FEDERAL ENVIRONMENTAL PROTECTION AGENCY AND ANY OTHER REGULATORY BODY THAT HAS JURISDICTION.
- ALL DISTURBED AREAS SHALL BE SMOOTHLY GRADED TO PROVIDE POSITIVE DRAINAGE, AWAY FROM PROPOSED STRUCTURES, AND SHALL BE STABILIZED WITH TOPSOIL, SEED AND MULCH, EXCEPT IN AREAS CALLING FOR PAVING. IF SETTLEMENT OCCURS, THE AREA OF SETTLEMENT SHALL BE RESTORED TO GRADE, RESEEDED AND REMULCHED TO THE SATISFACTION OF THE OWNER AT NO ADDITIONAL COST TO THE OWNER. THE CONTRACTOR SHALL PROVIDE SEED TYPE AS SPECIFIED.
- THE CONTRACTOR SHALL ASSUME ALL RESPONSIBILITY FOR ANY DEVIATIONS FROM THESE DRAWINGS AND SPECIFICATIONS.
- THE CONTRACTOR SHALL PROVIDE NECESSARY STAKEOUT OF LINE AND GRADE FOR CONSTRUCTION.
- THE CONTRACTOR SHALL PROVIDE CUT SHEETS FOR ALL ROADS, CURBS, WATER, SEWER, SWM BASIN AND STORM DRAIN CONSTRUCTION. CUT SHEETS SHALL BE PREPARED BY A LICENSED SURVEYOR RETAINED BY AND PAID BY THE CONTRACTOR. COPIES OF ALL CUT SHEETS SHALL BE PROVIDED TO THE ENGINEER FOR REVIEW. ENGINEER REVIEWED CUT SHEETS SHALL BE PROVIDED TO THE CONTRACTOR PRIOR TO THE CONTRACTOR PERFORMING ANY WORK OR INSTALLING PIPE OR OTHER FEATURES.
- THE OWNER RESERVES THE RIGHT TO AWARD OTHER CONTRACTS OR PERFORM OTHER WORK IN THE VICINITY OF WORK DESIGNATED ON THESE DRAWINGS. THE CONTRACTOR SHALL COOPERATE WITH AND COORDINATE HIS OPERATIONS WITH OTHER CONTRACTORS OR WORKMEN EMPLOYED BY THE OWNER.
- NO INFORMATION REGARDING DEPTH TO ANY TEMPORARY OR PERMANENT GROUND WATER TABLE IS PROVIDED ON THESE DRAWINGS AS IT RELATES TO EXCAVATION OR INSTALLATION OF UTILITIES IN TRENCHES. THE CONTRACTOR SHALL INVESTIGATE TO HIS SATISFACTION THE SITE CONDITIONS REGARDING THE DEPTH TO GROUND WATER. GENERALLY, PIPING, TRENCH AND STRUCTURE CONSTRUCTION SHALL BE PROCEEDED IN A DEWATERED STATE, CONSISTENT WITH GOOD CONSTRUCTION PRACTICES. ALL EXCAVATIONS FOR MANHOLES AND OTHER CHAMBERS SHALL BE CONTINUALLY DEWATERED UNTIL THE BACKFILL OPERATION HAS BEEN COMPLETED. THE CONTRACTOR SHALL COORDINATE WITH THE OWNER FOR TEST FITTING.
- IT SHALL BE DISTINCTLY UNDERSTOOD THAT FAILURE TO MENTION SPECIFICALLY ANY WORK WHICH WOULD NORMALLY BE REQUIRED TO COMPLETE THE PROJECT SHALL NOT RELIEVE THE CONTRACTOR OF HIS RESPONSIBILITY TO PERFORM SUCH WORK.
- THE CONTRACTOR SHALL NOTIFY THE FOLLOWING, TWO (2) DAYS PRIOR TO BEGINNING ANY WORK SHOWN ON THESE DRAWINGS:
 - A) PUBLIC LANDING, LLC. (410) 213-1900
 - B) WORCESTER COUNTY DPW (410) 632-2244
 - C) WORCESTER COUNTY DEVELOPMENT REVIEW (410) 632-1200
 - D) WORCESTER COUNTY ENVIRONMENTAL PROGRAMS (410) 632-1220
 - E) MISS UTILITY (800) 441-8355
 - F) J. W. SALM ENGINEERING, INC. (410) 641-0126
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE MEANS AND METHODS RESULTING FROM ANY EARTH MOVING AND/OR TEMPORARY STOCKPILING OF EARTH OR OTHER MATERIALS ON SITE. STOCKPILES SHALL BE DESIGNATED BY THE ENGINEER ON THE DRAWINGS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR REVERSING THE SOIL EROSION AND SEDIMENT CONTROL PLAN, SHOULD THE CONTRACTOR DEVIATE FROM THESE DRAWINGS.
- THESE DRAWINGS, THE DESIGN AND CONSTRUCTION FEATURES DISCLOSED ARE PROPRIETARY TO J.W. SALM ENGINEERING, INC. AND SHALL NOT BE ALTERED OR REUSED WITHOUT WRITTEN PERMISSION. COPYRIGHT, LATEST DATE HEREON. ANY DRAWING, REPRODUCTION, PLOT, ETC., WITHOUT A WET INK SIGNATURE AND SEAL IS NOT CERTIFIED AS TO ACCURACY AND AUTHENTICITY.
- THE CONTRACTOR IS SPECIFICALLY INSTRUCTED TO REVIEW, BECOME FAMILIAR WITH AND ADHERE TO ALL SOIL EROSION AND SEDIMENT CONTROL DETAILS AND NOTES CONTAINED ON THESE DRAWINGS.
- TRENCH COMPACTION FOR ALL UTILITIES SHALL BE AS FOLLOWS:
 - A. FOR AREAS WITHIN THE ROAD RIGHT-OF-WAY: 95% OF MODIFIED PROCTOR DENSITY AT +1-2% OF OPTIMUM MOISTURE CONTENT.
 - B. FOR NON-RIGHT-OF-WAY AREAS: 90% OF MODIFIED PROCTOR DENSITY AT +1-3% OF OPTIMUM MOISTURE CONTENT.
- THE CONTRACTOR SHALL REFER TO THE OVERALL SWM AND SESC PLAN FOR THE OTHER RESTRICTIONS AND CONDITIONS OF SITE CONSTRUCTION.
- THE CONTRACTOR SHALL HYDRAULICALLY TEST ALL PIPES IN THE PRESENCE OF THE ENGINEER. FORTY EIGHT HOURS NOTICE SHALL BE GIVEN TO THE ENGINEER PRIOR TO THE CONTRACTOR PERFORMING ANY TESTING. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MEETING ALL REQUIREMENTS OF THIS TESTING. SHOULD ANY PORTION OF THE WORK FAIL TO MEET THE CRITERIA, THE CONTRACTOR SHALL TAKE CORRECTIVE MEASURES, AT HIS OWN EXPENSE, TO CONFORM TO THE TEST REQUIREMENTS.
- PORTIONS OF THIS PROPERTY LIE WITHIN THE WORCESTER COUNTY ATLANTIC COASTAL BAYS CRITICAL AREA (WC, CO, A.C.B.C.A.). ALL DEVELOPMENT OF PROPERTY LYING WITHIN THE CRITICAL AREAS WILL BE SUBJECT TO THE PROVISIONS OF THE WC, CO, A.C.B.C.A. LAW IN EFFECT AT THE TIME OF THE PROPOSED DEVELOPMENT ACTIVITY.
- THE DEVELOPER SHALL FURNISH SWM AND ROAD AS-BUILTS SHOWING ROAD ELEVATIONS EVERY 100 FEET ON STRAIGHT-AWAYS, AND EVERY 50 FEET ON CURVES. THESE SHALL ALSO INCLUDE CATCH BASIN RIM ELEVATIONS AND ALL PIPE INVERT ELEVATIONS.
- AN AUGER AND COMPACTION TEST PROGRAM SHALL BE COMPLETED AT THE DEVELOPER'S EXPENSE. RESULTS SHALL BE PROVIDED TO THE ROADS DIVISION OF PUBLIC WORKS FOR THEIR REVIEW, PRIOR TO ROAD INSTALLATION.

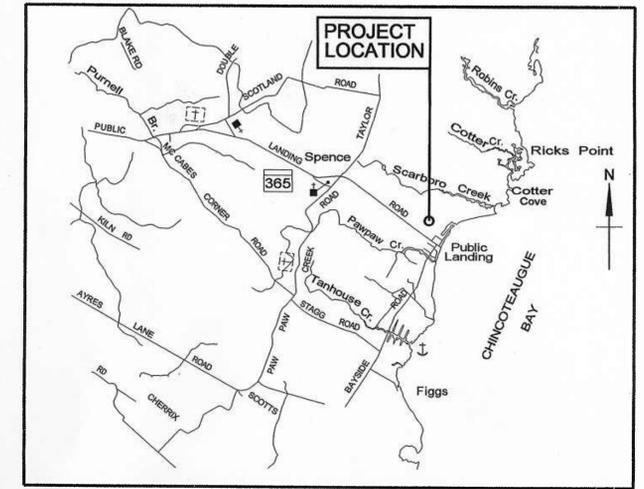
LEGEND:

EXISTING FEATURES

- ROAD RIGHT OF WAY
- NON-TIDAL WETLAND (NTW) BOUNDARY
- 25' WETLAND BUFFER
- 1000' CRITICAL AREA PROGRAM BOUNDARY
- STATE TIDAL WETLAND BOUNDARY
- PRIVATE TIDAL WETLAND BOUNDARY
- OVERHEAD ELECTRIC
- EDGE OF PAVEMENT
- TREELINE
- FLOOD ZONE BOUNDARY
- CONTOUR

PROPOSED FEATURES

- PARCEL LINE
- BUILDING RESTRICTION LINE (BRL)
- LOT LINE
- STREET RIGHT-OF-WAY
- EDGE OF PAVEMENT
- STORM WATER MANAGEMENT
- DITCH CENTERLINE
- DITCH TOP OF BANK
- SEPTIC RESERVE AREA BOUNDARY
- STORM DRAIN, JUNCTION BOX, INLET STRUCTURES
- FOREST CONSERVATION LINE
- EASEMENT
- UTILITY EASEMENT
- CONTOUR
- SPOT ELEVATION
- FOREST RETENTION SIGN
- REFORESTATION SIGN
- FOREST CONSERVATION AREA



VICINITY MAP
SCALE: 1" = 1000'

INDEX OF DRAWINGS:

DRAWING No.:	SHEET No.:	TITLE
212-01-001	1 of 24	COVER SHEET, NOTES, LEGEND, INDEX AND VICINITY MAP
212-01-002	2 of 24	KEY MAP, NOTES AND SUBMITTAL SCHEDULE
212-01-003	3 of 24	ROAD, GRADING AND STORMWATER MANAGEMENT (SWM) PLAN (50-SCALE)
212-01-004	4 of 24	ROAD, GRADING AND STORMWATER MANAGEMENT (SWM) PLAN (50-SCALE)
212-01-005	5 of 24	ROAD, GRADING AND STORMWATER MANAGEMENT (SWM) PLAN (50-SCALE)
212-01-006	6 of 24	ROAD, GRADING AND STORMWATER MANAGEMENT (SWM) PLAN (50-SCALE)
212-01-007	7 of 24	ROAD, GRADING AND STORMWATER MANAGEMENT (SWM) PLAN (50-SCALE)
212-01-008	8 of 24	ROAD, GRADING AND STORMWATER MANAGEMENT (SWM) PLAN (50-SCALE)
212-01-009	9 of 24	ROAD, GRADING AND STORMWATER MANAGEMENT (SWM) PLAN (50-SCALE)
212-01-010	10 of 24	ROAD DETAILS
212-01-011	11 of 24	ROAD PROFILES
212-01-012	12 of 24	ROAD PROFILES
212-01-013	13 of 24	INLET STRUCTURE DETAILS
212-01-014	14 of 24	STORM WATER MANAGEMENT BASIN SECTIONS AND DETAILS
212-01-015	15 of 24	SOIL EROSION AND SEDIMENT CONTROL (SESC) PLAN (50-SCALE) & SWM LANDSCAPING PLAN
212-01-016	16 of 24	SOIL EROSION AND SEDIMENT CONTROL (SESC) PLAN (50-SCALE) & SWM LANDSCAPING PLAN
212-01-017	17 of 24	SOIL EROSION AND SEDIMENT CONTROL (SESC) PLAN (50-SCALE) & SWM LANDSCAPING PLAN
212-01-018	18 of 24	SOIL EROSION AND SEDIMENT CONTROL (SESC) PLAN (50-SCALE) & SWM LANDSCAPING PLAN
212-01-019	19 of 24	SOIL EROSION AND SEDIMENT CONTROL (SESC) PLAN (50-SCALE) & SWM LANDSCAPING PLAN
212-01-020	20 of 24	SOIL EROSION AND SEDIMENT CONTROL (SESC) PLAN (50-SCALE) & SWM LANDSCAPING PLAN
212-01-021	21 of 24	SOIL EROSION AND SEDIMENT CONTROL (SESC) PLAN (100-SCALE) & SWM LANDSCAPING PLAN
212-01-022	22 of 24	SESC DETAILS
212-01-023	23 of 24	SESC DETAILS AND NOTES
212-01-024	24 of 24	FIRE SUPPRESSION TANK DETAILS

WORCESTER COUNTY ATLANTIC COASTAL BAYS CRITICAL AREA LAW NOTES:

1) THIS PROPERTY LIES WITHIN THE WORCESTER COUNTY ATLANTIC COASTAL BAYS CRITICAL AREA. ANY AND ALL PROPOSED DEVELOPMENT ACTIVITY MUST MEET THE REQUIREMENTS OF TITLE 9 (LAND AND WATER RESOURCES), SUBTITLE 1 (ATLANTIC COASTAL BAYS CRITICAL AREA) OF THE WORCESTER COUNTY CODE OF PUBLIC LOCAL LAWS IN EFFECT AT THE TIME OF THE PROPOSED DEVELOPMENT ACTIVITY.

FOREST CONSERVATION NOTE:

THIS SUBDIVISION IS SUBJECT TO THE WORCESTER COUNTY FOREST CONSERVATION LAW. THIS SUBDIVISION IS SUBJECT TO FOREST CONSERVATION PLAN NO. 06-16. ANY FUTURE APPROVAL OF THIS LAND FOR A REGULATED ACTIVITY SHALL BE SUBJECT TO THE COUNTY FOREST CONSERVATION LAW. A FOREST CONSERVATION PLAN HAS BEEN APPROVED AND IS ON FILE WITH THE DEPARTMENT OF PLANNING, PERMITS AND INSPECTIONS. A SHORT-TERM MANAGEMENT AGREEMENT AND A PERPETUAL PROTECTIVE AGREEMENT - DEED OF FOREST CONSERVATION EASEMENT, WORCESTER COUNTY, MARYLAND, WILL BE RECORDED SIMULTANEOUSLY WITH THIS PLAT IN THE LAND RECORDS OF WORCESTER COUNTY, MARYLAND.

WORCESTER COUNTY ENVIRONMENTAL PROGRAMS NOTES:

- ALL SRA'S SHALL BE PROTECTED BY TEMPORARY CONSTRUCTION FENCING PRIOR TO HOME CONSTRUCTION.
- WATER SUPPLY WELLS ARE REQUIRED TO BE DRILLED TO A CONFINED AQUIFER.

Sediment Control Plan Approval
Worcester Soil Conservation District
Snow Hill, MD 21863

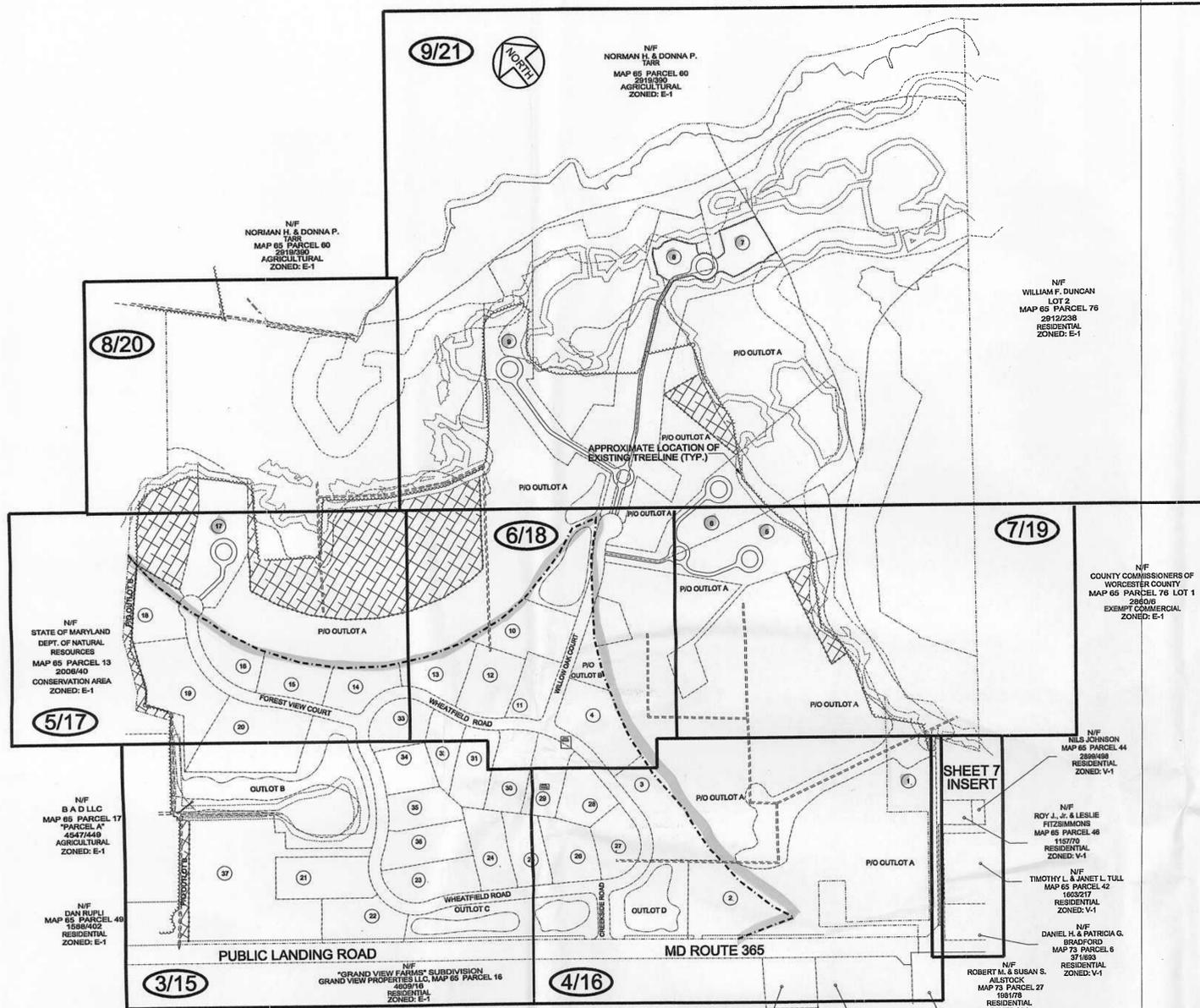
Approved by: *[Signature]*
Date: 11/13/08

Anytime an erosion or sediment problem occurs the prompt and necessary measures will be taken to correct it by the owner and/or contractor. An approved copy of the Sediment Control Plan will be on site at all times.

S.W.M. Plan Approval
Worcester County D.R.&P.
Snow Hill, MD 21863
Approved by: *[Signature]*
Date: 11/13/08
THIS APPROVAL EXPIRES ONE (1) YEAR.
Bond # 255,025



OWNER: PUBLIC LANDING, LLC. 9428 STEPHEN DECATUR HIGHWAY BERLIN, MD 21811 PHONE: 410.213.1900	ENGINEER: J. W. SALM ENGINEERING, INC. P.O. BOX 397, 9842 MAIN STREET, SUITE 3 BERLIN, MD 21811 PHONE: 410.641.0126	SURVEYOR: F. DOUGLAS JONES SURVEYING ASSOCIATES 715-A EAST WILLIAM STREET P.O. BOX 2658 SALISBURY, MARYLAND 21802 PHONE: 410.543.2615	ENVIRONMENTAL CONSULTANT: ENVIRONMENTAL RESOURCES, INC. 38173 DUPONT BOULEVARD P.O. BOX 169 SELBYVILLE, DE 19975 PHONE: 302.436.9637 FAX: 302.436.9639	SITE DATA: 1) TAX MAP 65, PARCEL 48 2) TOTAL TRACT: 234.97 +/- ACRES 3) TOTAL DISTURBED ACRES: 33.88 +/- ACRES 4) ON-SITE SOILS CONSIST OF: Br - BOXIRON AND BROADKILL SOILS CkA - CEDARTOWN-ROSEDALE COMPLEX, 0-2% SLOPES CkB - CEDARTOWN-ROSEDALE COMPLEX, 2-5% SLOPES EVC - EVESBORO LOAMY SAND, 5-10% SLOPES Fk - FALLSINGTON SANDY LOAM FmB - FORT MOTT LOAMY SAND, 0-2% SLOPES Gk - GALESTOWN LOAMY SAND, 2-5% SLOPES HkA - HAMBROOK SANDY LOAM, 0-2% SLOPES HkB - HAMBROOK SANDY LOAM, 2-5% SLOPES HkC - HAMMONTON LOAMY SAND, 2-5% SLOPES Hu - HURLOCK LOAMY SAND KkA - KLEJ LOAMY SAND, 0-2% SLOPES Kk - KLEJ LOAMY SAND, 2-5% SLOPES Mk - MULICA-BERRYLAND COMPLEX O - OTHELLO SILT LOAM Pk - PUCKUM MUCKY PEAT Rk - ROSEDALE LOAMY SAND, 2-5% SLOPES Rk - RUNGLINT LOAMY SAND, 2-5% SLOPES SsB - SASSAFRAS SANDY LOAM, 2-5% SLOPES Uz - UJORTHENTS WkA - WOODSTOWN SANDY LOAM, 0-2% SLOPES WkB - WOODSTOWN SANDY LOAM, 2-5% SLOPES Zk - ZERKIAH SILT LOAM 5) CONTACT WORCESTER COUNTY AT 410.632.1200, PRIOR TO PERFORMING ANY WORK ON THIS PROJECT IN ORDER TO SCHEDULE A CONFERENCE.	DESIGNED BY: LCS DRAWN BY: MG CHECKED BY: JWS3 REVISIONS: 	COVER SHEET, NOTES, LEGEND, INDEX AND VICINITY MAP CREEKSIDE AT PUBLIC LANDING CONSTRUCTION DRAWINGS AND SWM PLANS PARCEL 48, MAP 65 SECOND TAX DISTRICT, PUBLIC LANDING, WORCESTER COUNTY, MARYLAND J. W. SALM ENGINEERING, INC. P.O. BOX 397, 9842 MAIN STREET, SUITE 3 BERLIN, MD 21811 SCALE: 1" = 50' DATE: JULY 2008 DRAWING No.: 212-01-001 SHEET No.: 1 of 24
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KEY MAP
SCALE: 1" = 300'

1, 5, 6, 7, 8, 9 + 17
2 lots
1 outlot - A
1 - No B
5 - some B Forested
6 " " "

SUBMITTALS:

- 1) SHOP DRAWINGS (SUBMIT SEVEN (7) COPIES)
- A) SHOP DRAWINGS SHALL BE ORIGINAL DRAWINGS, PREPARED BY THE CONTRACTOR, SUBCONTRACTOR, SUPPLIER OR DISTRIBUTOR, WHICH ILLUSTRATE SOME PORTION OF THE WORK, SHOWING, FABRICATION, LAYOUT, SETTING OR ERECTION DETAILS.
- B) PRESENT SHOP DRAWINGS IN A CLEAR AND THOROUGH MANNER. DETAILS SHALL BE IDENTIFIED BY REFERENCE TO SHEET AND DETAIL OR SCHEDULE SHOWN ON THESE DRAWINGS.
- C) REPRODUCTIONS OF MARKED CONTRACT DRAWINGS WILL NOT BE ACCEPTABLE.
- D) THE CONTRACTOR SHALL SUBMIT THE SPECIFIED NUMBER OF COPIES OF SHOP DRAWINGS TO THE ENGINEER FOR APPROVAL. AT THE TIME OF SUBMISSION, THE CONTRACTOR SHALL CALL TO THE ENGINEER'S ATTENTION, IN WRITING, ANY DEVIATIONS THAT THE SHOP DRAWINGS MAY HAVE FROM THE REQUIREMENTS OF THE DRAWINGS AND SPECIFICATIONS. ALL SHOP DRAWINGS SHALL BE SUBMITTED WITH AN INDEX AND A COVER LETTER MARKED EITHER "SUBMITTED AS SPECIFIED" OR "SUBMITTED AS EQUAL TO SPECIFIED".
- E) EACH COPY OF THE SHOP DRAWINGS SHALL BE MARKED TO IDENTIFY ALL OPTIONS OR FEATURES THE EQUIPMENT WILL CONTAIN.
- F) ALL SHOP DRAWINGS, REGARDLESS IF "SUBMITTED AS SPECIFIED" OR "SUBMITTED AS EQUAL TO SPECIFIED", SHALL BE FURNISHED WITH COMPLETE, SPECIFIC DETAILED INFORMATION FROM THE MANUFACTURER OR SUPPLIER OF THE MATERIAL OR EQUIPMENT THE CONTRACTOR PROPOSES TO FURNISH, IN WHICH THE REQUIREMENTS OF THE SPECIFICATIONS ARE CLEARLY SHOWN TO BE MET. THIS SHALL INCLUDE A POINT BY POINT COMPARISON WITH THE DETAIL REQUIREMENTS OF THE SPECIFICATIONS.
- G) WHERE ANY ARTICLE IS SPECIFIED BY TRADE NAME OR NAME OF MANUFACTURER, WITH OR WITHOUT THE CLAUSE "OR EQUAL", IT IS INTENDED TO ESTABLISH THE QUALITY OF THE ARTICLE. THE CONTRACTOR MAY PROPOSE TO USE MATERIAL OR EQUIPMENT OF ANY OTHER MANUFACTURER AS AN "OR EQUAL" TO MATERIALS OR EQUIPMENT SPECIFIED.
- H) SUBSTITUTION OF EQUIPMENT OR MATERIALS OTHER THAN THOSE SPECIFIED. MAY BE CONSIDERED BY THE TOWN, PROVIDING, IN THE OPINION OF THE TOWN ENGINEER, SUCH EQUIPMENT OR MATERIAL IS EQUAL TO OR BETTER THAN THAT SPECIFIED. THE DECISION OF THE TOWN ENGINEER WITH RESPECT TO APPROVAL OR DISAPPROVAL OF ANY MATERIAL OR EQUIPMENT PROPOSED TO BE SUBSTITUTED AS AN "OR EQUAL" IS FINAL. THE CONTRACTOR SHALL HAVE NO CLAIM OF ANY SORT BY REASON OF SUCH DECISION.
- I) IF THE CONTRACTOR PROPOSES TO SUBSTITUTE MATERIALS OR EQUIPMENT AS AN "OR EQUAL" TO THOSE SPECIFIED, IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO FURNISH, IN ADDITION TO THE REQUIRED INFORMATION LISTED ABOVE, A POINT BY POINT COMPARISON OF THE MATERIAL OR EQUIPMENT SPECIFIED ON THESE DRAWINGS WITH THAT PROPOSED TO BE SUBSTITUTED. THE BURDEN OF RESPONSIBILITY IN FURNISHING THIS INFORMATION IS WITH THE CONTRACTOR.
- 2) PRODUCT DATA (SUBMIT SEVEN (7) COPIES)
- A) CLEARLY MARK EACH COPY TO IDENTIFY PERTINENT PRODUCTS OR MODELS. DELETE BY CLEARLY MARKING ALL NON-APPLICABLE INFORMATION. SHOW PERFORMANCE CHARACTERISTICS AND CAPACITIES. SHOW DIMENSIONS AND CLEARANCES REQUIRED. SHOW WIRING AND PIPING DIAGRAMS AND CONTROLS.
- B) MANUFACTURER'S STANDARD SCHEMATIC DRAWINGS AND DIAGRAMS SHALL BE MODIFIED TO DELETE INFORMATION NOT APPLICABLE TO THE WORK AND BE SUPPLEMENTED TO PROVIDE INFORMATION SPECIFICALLY APPLICABLE TO THE WORK.
- C) MANUFACTURER'S CATALOG SHEETS, BROCHURES, DIAGRAMS, ILLUSTRATIONS AND OTHER STANDARD DESCRIPTIVE DATA SHALL BE CLEARLY MARKED TO IDENTIFY PERTINENT MATERIALS, PRODUCTS OR MODELS AND SHOW DIMENSIONS AND CLEARANCES REQUIRED.
- 3) CERTIFICATIONS (CERTIFICATES OF COMPLIANCE) (SUBMIT SEVEN (7) COPIES)
- A) THE ENGINEER MAY PERMIT USE, BEFORE SAMPLING, AND TESTING OF CERTAIN MATERIALS OR ASSEMBLIES ACCOMPANIED BY CERTIFICATES OF COMPLIANCE STATING THAT SUCH MATERIALS OR ASSEMBLIES FULLY COMPLY WITH THESE DRAWINGS. THE CERTIFICATE SHALL BE SIGNED BY THE MANUFACTURER. EACH LOT OF MATERIALS OR ASSEMBLIES DELIVERED MUST BE ACCOMPANIED BY A CERTIFICATE OF COMPLIANCE IN WHICH THE LOT IS CLEARLY IDENTIFIED.
- B) MATERIALS OR ASSEMBLIES USED ON THE BASIS OF CERTIFICATES OF COMPLIANCE MAY BE SAMPLED AND TESTED AT ANY TIME. IF FOUND NOT IN CONFORMITY WITH THESE DRAWINGS, THEY WILL BE SUBJECT TO REJECTION WHETHER IN PLACE OR NOT.
- C) THE FORM AND DISTRIBUTION OF CERTIFICATES OF COMPLIANCE SHALL BE AS APPROVED BY THE ENGINEER.
- D) THE ENGINEER RESERVES THE RIGHT TO REFUSE PERMISSION FOR USE OF MATERIALS OR ASSEMBLIES ON THE BASIS OF CERTIFICATES OF COMPLIANCE.
- E) ALL MATERIALS USED WILL BE INSPECTED, SAMPLED AND TESTED IN ACCORDANCE WITH THESE REQUIREMENTS AND OTHERS AS SET FORTH ELSEWHERE IN THESE DRAWINGS, IN WHICH PARTICULAR REFERENCE IS MADE TO A SPECIFIC MATERIAL. UNLESS OTHERWISE DESIGNATED, TESTS WILL BE MADE IN ACCORDANCE WITH THE MOST RECENTLY PUBLISHED, CITED STANDARD, TENTATIVE OR INTERIM, METHODS OF AASHTO, ASTM, AWWA, WORCESTER COUNTY, OR OTHERS WHICH ARE CURRENT AS OF THE DATE OF ADVERTISEMENT FOR BIDS. THESE TESTS WILL BE MADE AT THE EXPENSE OF THE OWNER, UNLESS OTHERWISE SPECIFIED.
- F) ACCEPTANCE TESTING BY THE OWNER AS DESCRIBED HERE AND ELSEWHERE IS NOT CONSIDERED AS A REPLACEMENT FOR CONTROL TESTING CONDUCTED BY THE CONTRACTOR OR MANUFACTURER PRODUCING MATERIALS FOR THE CONTRACTOR WHEN THE CONTRACTOR OR MANUFACTURER IS NOT PROVIDING ADEQUATE CONTROL TESTING FACILITIES ON HIS OWN BEHALF. THE ENGINEER MAY REFUSE TO CARRY OUT RESAMPLING AND TESTING OF MATERIALS WHICH HAVE BEEN SHOWN TO BE DEFECTIVE BY NORMAL SAMPLING AND TESTING ROUTINES. THE ENGINEER MAY ALSO REFUSE TO RESAMPLE AND TEST DEFECTIVE MATERIALS UNTIL AND UNLESS CORRECTIVE ACTION HAS BEEN TAKEN BY THE CONTRACTOR OR THE MANUFACTURER.
- 4) CONTRACTOR'S RESPONSIBILITIES
- A) THE CONTRACTOR IS RESPONSIBLE FOR COORDINATING THE WORK OF ALL TRADES, CONFORMING AND CORRELATING ALL QUANTITIES AND DIMENSIONS, SELECTING FABRICATION PROCESSES AND TECHNIQUES OF CONSTRUCTION, AND PERFORMING ALL WORK IN A SAFE MANNER.
- B) THE CONTRACTOR SHALL REVIEW ALL SUBMITTALS PRIOR TO SUBMISSION, DETERMINING AND VERIFYING FIELD MEASUREMENTS, FIELD CONSTRUCTION CRITERIA, CATALOG NUMBERS AND SIMILAR DATA FOR CONFORMANCE TO THE REQUIREMENTS OF THE CONTRACT DOCUMENTS.
- C) THE CONTRACTOR SHALL NOTIFY THE ENGINEER, IN WRITING AT THE TIME OF SUBMITTAL, OF ANY DEVIATIONS FROM THE REQUIREMENTS OF THE CONTRACT DOCUMENTS, INCLUDING THE REASONS FOR THE DEVIATIONS AND REQUESTING A DEVIATION FROM THE REQUIREMENTS OF THE CONTRACT DOCUMENTS. THE CONTRACTOR'S RESPONSIBILITY FOR DEVIATIONS IS NOT RELIEVED BY THE ENGINEER'S REVIEW OF SUBMITTALS, UNLESS THE ENGINEER GIVES WRITTEN ACCEPTANCE OF SPECIFIC DEVIATIONS REQUESTED BY THE CONTRACTOR.
- D) THE CONTRACTOR SHALL SUBMIT THE REQUIRED NUMBER OF COPIES TO THE ENGINEER FOR REVIEW. A 3" X 8" SPACE SHALL BE LEFT BLANK ON ALL PAPER SUBMITTALS FOR THE ENGINEER'S STAMP.
- E) THE CONTRACTOR SHALL MAKE ALL CORRECTIONS AND/OR CHANGES IN THE SUBMITTALS REQUIRED BY THE ENGINEER AND RESUBMIT UNTIL APPROVED. RESUBMITTED SHOP DRAWINGS AND PRODUCT DATA SHALL CONSIST OF REVISED, CLEAN COPIES, AS SPECIFIED FOR THE INITIAL SUBMITTAL. THE CONTRACTOR SHALL INDICATE ANY CHANGES MADE OTHER THAN THOSE REQUESTED BY THE ENGINEER.
- F) THE CONTRACTOR SHALL BEGIN NO FABRICATION OR WORK WHICH REQUIRES SUBMITTALS UNTIL THE RETURN OF SUBMITTALS SHOWING THE ENGINEER'S STAMP WITH INITIALS OR SIGNATURE FOR REVIEW AND APPROVAL.
- G) THE CONTRACTOR'S RESPONSIBILITY FOR ERRORS AND OMISSIONS IN SUBMITTALS IS NOT RELIEVED BY THE ENGINEER'S REVIEW OF THE SUBMITTAL.
- 5) ENGINEER'S RESPONSIBILITIES
- A) THE ENGINEER WILL REVIEW ALL SUBMITTALS FOR GENERAL CONFORMANCE WITH THE DESIGN CONCEPT OF THE PROJECT AND FOR GENERAL COMPLIANCE WITH THE INFORMATION PROVIDED IN THE CONTRACT DOCUMENTS.
- B) IF CONTRACTOR SUBMITTALS DEVIATE FROM THE REQUIREMENTS OF THE CONTRACT DOCUMENTS, THE CONTRACTOR SHALL ADVISE THE ENGINEER OF THE DEVIATIONS, IN WRITING ACCOMPANYING THE SUBMITTAL, INCLUDING THE REASONS FOR THE DEVIATIONS AND REQUESTING A DEVIATION FROM THE REQUIREMENTS OF THE CONTRACT DOCUMENTS.
- C) THE ENGINEER WILL REVIEW SUBMITTALS WITH REASONABLE PROMPTNESS AS DETERMINED BY THE PROJECT SCHEDULE AND RETURN THEM TO THE CONTRACTOR FOR DISTRIBUTION OR RESUBMITTAL WITHIN 14 DAYS OF RECEIPT AT THE ENGINEER'S OFFICE.
- D) THE ENGINEER WILL REVIEW AND STAMP SHOP DRAWINGS AND OTHER SUBMITTALS IN THE FOLLOWING MANNER:
 - 1) ACCEPTED AS SPECIFIED
 - 2) ACCEPTED AS EQUAL TO SPECIFIED
 - 3) ACCEPTED AS NOTED
 - 4) REVISE AND RESUBMIT
 - 5) REJECTED
 - 6) INFORMATIONAL PURPOSES ONLY
- E) THE ENGINEER WILL AFFIX A STAMP WITH INITIALS OR SIGNATURE CERTIFYING THE REVIEW OF THE SUBMITTAL.
- F) THE ENGINEER WILL REVIEW REVISED AND RESUBMITTED SHOP DRAWINGS AND OTHER SUBMITTALS WITHIN 14 DAYS OF RECEIPT AT THE ENGINEER'S OFFICE. AN EXTENSION OF TIME OR ADJUSTMENT OF COST WILL NOT BE ALLOWED DUE TO REJECTION OF DEFICIENT, INCORRECT OR INCOMPLETE SUBMITTALS.
- G) THE ENGINEER'S REVIEW OF SEPARATE ITEMS DOES NOT CONSTITUTE A REVIEW OF THE ASSEMBLY IN WHICH THE ITEM FUNCTIONS.
- H) CORRECTIONS OR COMMENTS ON THE CONTRACTOR'S SUBMITTALS, RESULTING FROM THE ENGINEER'S REVIEW, DO NOT RELIEVE THE CONTRACTOR FROM COMPLIANCE WITH THE REQUIREMENTS OF THE CONTRACT DOCUMENTS. THE OWNER OR ENGINEER ARE NOT RESPONSIBLE FOR ERRORS OR OMISSIONS ON ANY SUBMITTALS FURNISHED BY THE CONTRACTOR, EVEN THOUGH THE SUBMITTALS CONTAINING SUCH ERRORS WERE INADVERTENTLY APPROVED.
- I) THE ENGINEER WILL PROVIDE COPIES OF THE REVIEWED SUBMITTAL TO THE TOWN ENGINEER.

- 6) RESUBMISSION REQUIREMENTS
- A) MAKE ANY CORRECTIONS OR CHANGES IN THE SUBMITTALS REQUIRED BY THE ENGINEER AND RESUBMIT UNTIL APPROVED.
- B) REVISIONS TO SHOP DRAWINGS AND PRODUCT DATA SHALL CONSIST OF REVISED, CLEAN COPIES, AS SPECIFIED FOR THE INITIAL SUBMITTAL. INDICATE ANY CHANGES MADE OTHER THAN THOSE REQUESTED BY THE ENGINEER.
- 7) CUT SHEETS
- A) CUT SHEETS SHALL BE PREPARED BY THE CONTRACTOR'S LICENSED SURVEYOR.
- B) CUT SHEETS SHALL BE CHECKED BY THE CONTRACTOR FOR ACCURACY.
- C) CUT SHEETS SHALL BE SUBMITTED TO THE ENGINEER FOR REVIEW.
- D) NO CONSTRUCTION SHALL BE PERFORMED PRIOR TO THE ENGINEER'S REVIEW.

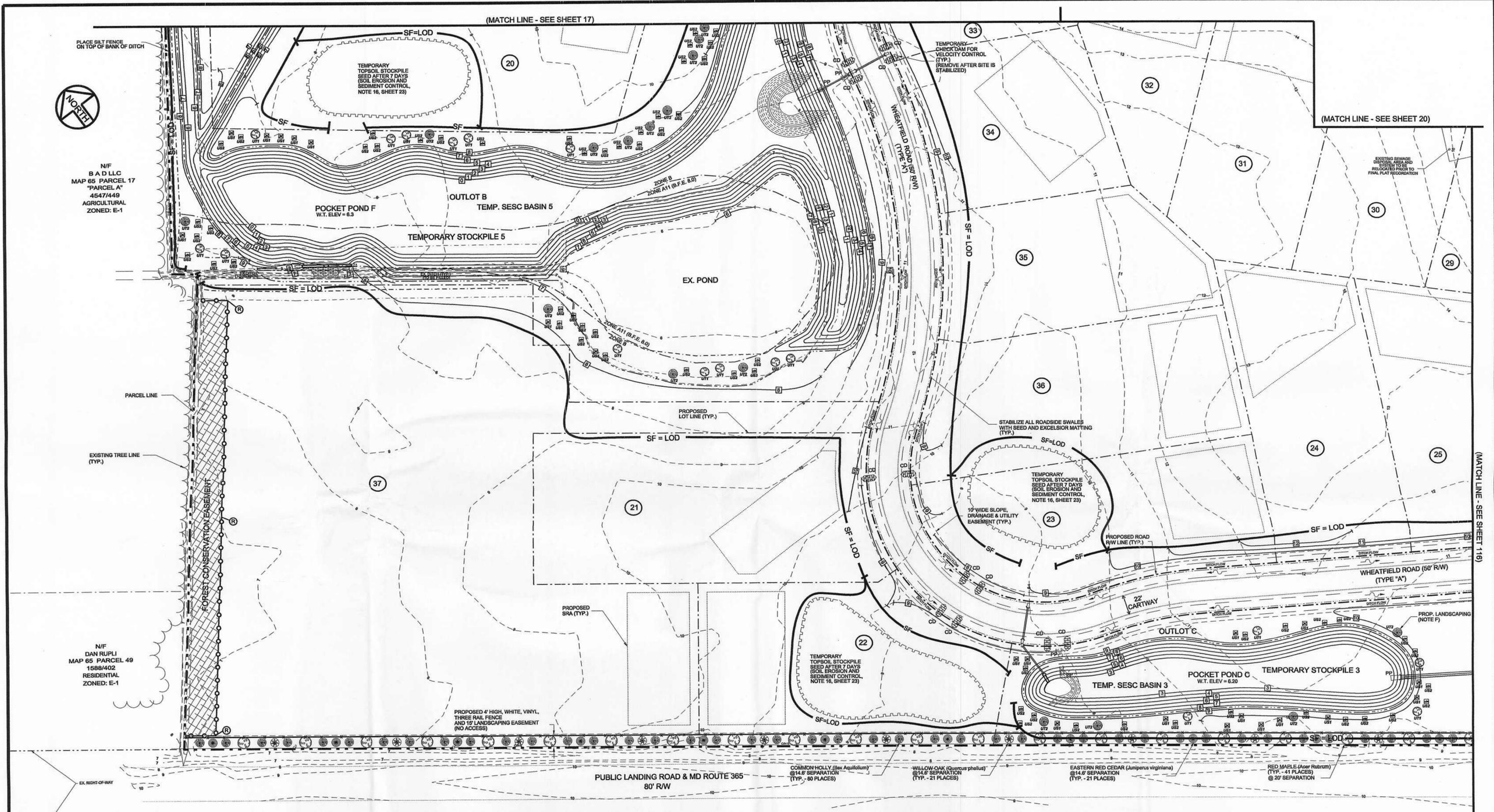
SCHEDULE:

SUBMIT TO THE ENGINEER, SHOP DRAWINGS, PRODUCT DATA AND CERTIFICATIONS FOR ITEMS LISTED IN THE FOLLOWING TABLE:

	SHOP DRAWINGS	CERTIFICATIONS	PRODUCT DATA
FIRE SUPPRESSION TANK SYSTEM	X	X	
PRECAST INLETS & JUNCTION BOXES	X	X	
INLET FRAME AND COVER	X	X	
STORM DRAIN PIPE		X	X
CONCRETE (FOR WIERWALLS)		X	X



DESIGNED BY: LCS	DRAWN BY: MR	CHECKED BY: JWS3	KEY MAP, NOTES, AND SUBMITTAL SCHEDULE		
			CREEKSIDE AT PUBLIC LANDING CONSTRUCTION DRAWINGS AND SWM PLANS PARCEL 48, MAP 65 SECOND TAX DISTRICT, PUBLIC LANDING, WORCESTER COUNTY, MARYLAND J. W. SALM ENGINEERING, INC. P.O. BOX 397, 9842 MAIN STREET, SUITE 3 BERLIN, MD 21811		
JOHN W. SALM, III REVISIONS: _____ STATE OF MARYLAND PROFESSIONAL ENGINEER LICENSE NO. 10737 EXPIRES 06/30/2010			SCALE: AS SHOWN	DATE: JULY 2008	DRAWING NO.: 212-01-002
			SHEET NO.:	2 of 24	



SESC NOTES:

- 1) ALL POCKET PONDS, EMBANKMENTS AND SIDE SLOPES SHALL BE STABILIZED WITH SOD OR SEED EXCELSIOR MATTING IN ACCORDANCE WITH THE EROSION CONTROL MATTING DETAIL. (SEE DETAIL - SHEET 23)
- 2) IF SHALL BE MODIFIED AGIP (MAGIP), SEE DETAIL ON SHEET 23.
- 3) ON-SITE DESWATERING, IF AND WHEN REQUIRED, SHALL BE PROVIDED IN ACCORDANCE WITH AN APPROVED METHOD UTILIZING ONE OR MORE OF THE FOLLOWING METHODS:
 - A) FILTER BAG
 - B) REMOVABLE PUMP STATION (RPS)
 - C) SLUMP PIT (SP)
 - D) PORTABLE SEDIMENT TANK (PST)
- 4) RIP RAP PADS SHALL BE A MINIMUM OF 2.0 S.Y., CONSTRUCTED OF MD #57 STONE ON CLASS C FABRIC. THE MINIMUM BOTTOM WIDTH SHALL BE 3.0', MINIMUM THICKNESS SHALL BE 18". ALL RIP RAP PADS SHALL BE CONSTRUCTED PRIOR TO WATER ENTERING PIPES.
- 5) REFER TO TEMPORARY SESC BASIN SCHEDULE, SHEET 21 FOR DETAILS AND CLEANOUT ELEVATIONS FOR EACH INDIVIDUAL TEMPORARY SESC BASIN.

SWM LANDSCAPING NOTES:

- A) PLANT TYPES MAY BE SUBSTITUTED FOR OTHERS USING MATERIALS NATIVE TO WORCESTER COUNTY WITH DRP APPROVAL. THE CONTRACTOR'S LANDSCAPING SUBCONTRACTOR SHALL PROVIDE A DETAILED PLANTING PLAN TO THE ENGINEER 14 DAYS PRIOR TO PLANTING.
- B) THE GROUND COVER FOR THE TOP AND OUTSIDE BANKS SHALL CONSIST OF SHEEP FESCUE. MOW HEIGHT SHALL NOT BE BELOW TWO INCHES.

- C) GROUND COVER FOR THE INSIDE BANKS SHALL CONSIST OF TUSsock SEDGE AND WOOLGRASS. MOW HEIGHT SHALL NOT BE BELOW 4 INCHES. ANNUAL MOWING ONLY IN NOVEMBER.
- D) TREE AND SHRUB PRUNING IN ALL BASINS SHALL BE PERFORMED SEMI-ANNUALLY.
- E) THE CONTRACTOR SHALL PLACE ALL TREES AND SHRUBS IN THE FIELD IN THE PLANNED PLANTING POSITION. THE ENGINEER AND OWNER WILL REVIEW PLACEMENT. THE ENGINEER AND OWNER RESERVE THE RIGHT TO ALTER PLACEMENT LOCATIONS AT THIS TIME. THE LANDSCAPE SUBCONTRACTOR SHALL NOT PLANT TREES OR SHRUBS WITHOUT PRIOR REVIEW BY THE ENGINEER AND OWNER.
- F) ALL TREES AND SHRUBS SHALL BE MAINTAINED BY THE HOMEOWNER'S ASSOCIATION.
- G) SWM STRUCTURES SHALL BE MAINTAINED BY THE HOA AND INSPECTED ANNUALLY.

DUST CONTROL NOTES:

- I. THE CONTRACTOR SHALL PREVENT BLOWING AND MOVEMENT OF DUST FROM EXPOSED SOIL SURFACES TO REDUCE ON AND OFF-SITE DAMAGE, HEALTH HAZARDS, AND IMPROVE TRAFFIC SAFETY. THIS PRACTICE IS APPLICABLE TO AREAS SUBJECT TO DUST BLOWING AND MOVEMENT WHERE ON AND OFF-SITE DAMAGE IS LIKELY WITHOUT TREATMENT.
- II. TEMPORARY METHODS:
 - A. MULCHES - SEE STANDARDS FOR VEGETATIVE STABILIZATION WITH MULCHES ONLY. MULCH SHOULD BE CRIMPED OR TACKED OR PREVENT BLOWING.
 - B. VEGETATIVE COVER - SEE STANDARDS FOR TEMPORARY VEGETATIVE COVER.
 - C. TILLAGE - TO ROUGHEN SURFACE AND BRING CLODS TO THE SURFACE. THIS IS AN EMERGENCY MEASURE WHICH SHOULD BE USED BEFORE SOIL BLOWING STARTS. BEGIN PLOWING ON WINDWARD SIDE OF SITE. CHESEL-TYPE PLOWS SPACED ABOUT 12' APART, SPRING-TOOTHED HARROWS, AND SIMILAR ARE EXAMPLES OF EQUIPMENT WHICH MAY PRODUCE FLOWS THE DESIRED EFFECT.
 - D. IRRIGATION - THIS IS GENERALLY DONE AS AN EMERGENCY TREATMENT. SITE IS SPRINKLED WITH WATER UNTIL THE SURFACE IS MOIST. REPEAT AS NEEDED. AT NO TIME SHOULD THE SITE BE IRRIGATED TO THE POINT THAT RUNOFF BEGINS TO FLOW.
 - E. BARRIERS - SOLID BOARD FENCES, SILT FENCES, SNOW FENCES, BURLAP FENCES, STRAW BALES, AND SIMILAR MATERIAL CAN BE USED TO CONTROL AIR CURRENTS AND SOIL BLOWING. BARRIERS PLACED AT RIGHT ANGLES TO PREVAILING CURRENTS AT INTERVALS OF ABOUT 10 TIMES THEIR HEIGHT ARE EFFECTIVE IN CONTROLLING SOIL BLOWING.
- III. PERMANENT METHODS:
 - A. PERMANENT VEGETATION - SEE STANDARDS FOR PERMANENT VEGETATIVE COVER, AND PERMANENT STABILIZATION WITH SOD. EXISTING TREES OR LARGE SHRUBS MAY AFFORD VALUABLE PROTECTION IF LEFT IN PLACE.
 - B. TOPSOILING - COVERING WITH LESS ERODIBLE SOIL MATERIALS.
 - C. STONE - COVER SURFACE WITH CRUSHED STONE OR COARSE GRAVEL.

N/F
"GRAND VIEW FARMS" SUBDIVISION
GRAND VIEW PROPERTIES LLC
MAP 65 PARCEL 16
4609/16
RESIDENTIAL
ZONED: E-1

SESC LEGEND: REFER TO SHEET 20

SWM LANDSCAPING LEGEND: REFER TO SHEET 21

RECEIVED
NOV 26 2008
CRITICAL AREA PLAN
Chesapeake & Atlantic

DESIGNED BY: JWS3
DRAWN BY: MG
CHECKED BY: JWS3

JOHN W. SALM, III
REVISIONS

STATE OF MARYLAND
DEPARTMENT OF GENERAL SERVICES
ENGINEER LICENSE # 10731

SCALE: 1" = 50'

50 0 50 100

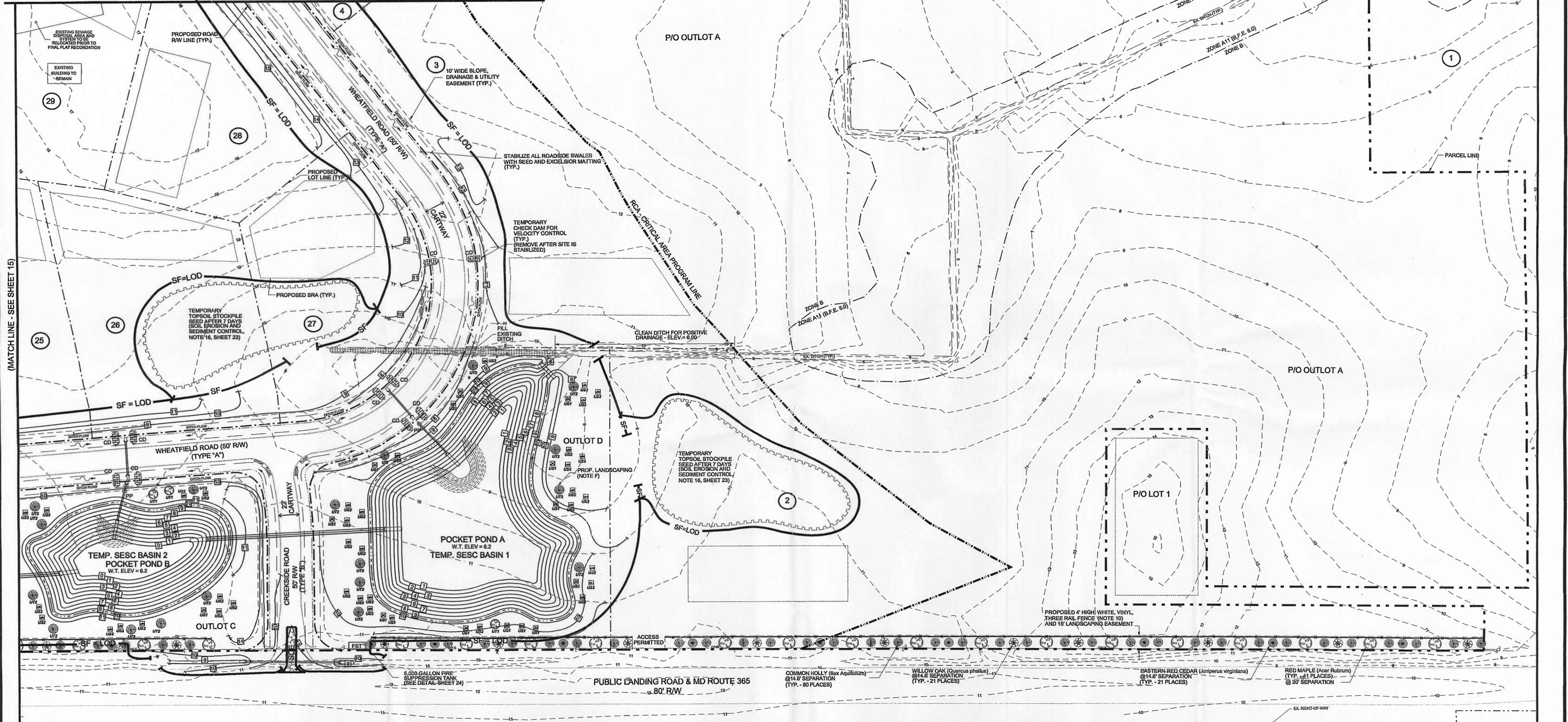
SOIL EROSION AND SEDIMENT CONTROL (SESC) PLAN AND SWM LANDSCAPE PLAN			
CREEKSIDE AT PUBLIC LANDING CONSTRUCTION DRAWINGS AND SWM PLANS			
PARCEL 48, MAP 65		SECOND TAX DISTRICT, PUBLIC LANDING, WORCESTER COUNTY, MARYLAND	
J. W. SALM ENGINEERING, INC.			
P.O. BOX 397, 9842 MAIN STREET, SUITE 3, BERLIN, MD 21811			
SCALE:	DATE:	DRAWING No.:	SHEET No.:
1" = 50'	JULY 2008	212-01-015	15 of 24

DUST CONTROL NOTES:

- I. THE CONTRACTOR SHALL PREVENT BLOWING AND MOVEMENT OF DUST FROM EXPOSED SOIL SURFACES TO REDUCE ON AND OFF-SITE DAMAGE, HEALTH HAZARDS, AND IMPROVE TRAFFIC SAFETY. THIS PRACTICE IS APPLICABLE TO AREAS SUBJECT TO DUST BLOWING AND MOVEMENT WHERE ON AND OFF-SITE DAMAGE IS LIKELY WITHOUT TREATMENT.
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 - B. TOPSOILING - COVERINGS WITH LESS ERODIBLE SOIL MATERIALS.
 - C. STONE - COVER SURFACE WITH CRUSHED STONE OR COARSE GRAVEL.

(MATCH LINE - SEE SHEET 19)



(MATCH LINE - SEE SHEET 15)

(MATCH LINE - SEE SHEET 18)

- SESC NOTES:**
- 1) ALL POCKET PONDS, EMBANKMENTS AND SIDE SLOPES SHALL BE STABILIZED WITH SOD OR SEED EXCELISOR MATTING IN ACCORDANCE WITH THE EROSION CONTROL MATTING DETAIL, (SEE DETAIL - SHEET 23).
 - 2) IF SHALL BE MODIFIED AGIP (MAGIP), SEE DETAIL ON SHEET 23.
 - 3) ON-SITE DEWATERING, IF AND WHEN REQUIRED, SHALL BE PROVIDED IN ACCORDANCE WITH AN APPROVED METHOD UTILIZING ONE OR MORE OF THE FOLLOWING METHODS:
 - A) FILTER BAG
 - B) REMOVABLE PUMP STATION (RPS)
 - C) SUMP PIT (SP)
 - D) PORTABLE SEDIMENT TANK (PST)
 - 4) RIP RAP PADS SHALL BE A MINIMUM OF 2.0 S.Y., CONSTRUCTED OF MD #57 STONE ON CLASS C FABRIC. THE MINIMUM BOTTOM WIDTH SHALL BE 30', MINIMUM THICKNESS SHALL BE 18". ALL RIP RAP PADS SHALL BE CONSTRUCTED PRIOR TO WATER ENTERING PIPES.
 - 5) REFER TO TEMPORARY SESC BASIN SCHEDULE, SHEET 21 FOR DETAILS AND CLEANOUT ELEVATIONS FOR EACH INDIVIDUAL TEMPORARY SESC BASIN.

- SWM LANDSCAPING NOTES:**
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 - B) THE GROUND COVER FOR THE TOP AND OUTSIDE BANKS SHALL CONSIST OF SHEEP FESCUE. MOW HEIGHT SHALL NOT BE BELOW TWO INCHES.
 - C) GROUND COVER FOR THE INSIDE BANKS SHALL CONSIST OF TUSSOCK SEDGE AND WOOLGRASS. MOW HEIGHT SHALL NOT BE BELOW 4 INCHES. ANNUAL MOWING ONLY IN NOVEMBER.
 - D) TREE AND SHRUB PRUNING IN ALL BASINS SHALL BE PERFORMED SEMI-ANNUALLY.
 - E) THE CONTRACTOR SHALL PLACE ALL TREES AND SHRUBS IN THE FIELD IN THE PLANNED PLANTING POSITION. THE ENGINEER AND OWNER WILL REVIEW PLACEMENT. THE ENGINEER AND OWNER RESERVE THE RIGHT TO ALTER PLACEMENT LOCATIONS AT THIS TIME. THE LANDSCAPE SUBCONTRACTOR SHALL NOT PLANT TREES OR SHRUBS WITHOUT PRIOR REVIEW BY THE ENGINEER AND OWNER.
 - F) ALL TREES AND SHRUBS SHALL BE MAINTAINED BY THE HOMEOWNERS ASSOCIATION.
 - G) SWM STRUCTURES SHALL BE MAINTAINED BY THE HOA AND INSPECTED ANNUALLY.

N/F
"GRAND VIEW FARMS" SUBDIVISION
GRAND VIEW PROPERTIES LLC
MAP 65 PARCEL 16
4609/16
RESIDENTIAL
ZONED: E-1

N/F
CLYDE L. & ROSALIE P. HAMAKER
MAP 65 PARCEL 21
227/409
RESIDENTIAL
ZONED: V-1

PLAN
SCALE: 1" = 50'

SESC LEGEND: REFER TO SHEET 20
SWM LANDSCAPING LEGEND: REFER TO SHEET 21



DESIGNED BY: JWS3	DRAWN BY: MG	CHECKED BY: JWS3	SOIL EROSION AND SEDIMENT CONTROL (SESC) PLAN AND SWM LANDSCAPE PLAN
JOHN W. SALM, III STATE OF MARYLAND PROFESSIONAL ENGINEER LICENSE NO. 19731			REVISIONS
CREEKSIDE AT PUBLIC LANDING CONSTRUCTION DRAWINGS AND SWM PLANS PARCEL 48, MAP 65 SECOND TAX DISTRICT, PUBLIC LANDING, WORCESTER COUNTY, MARYLAND J. W. SALM ENGINEERING, INC. P.O. BOX 397, 9842 MAIN STREET, SUITE 3 BERLIN, MD 21811			
SCALE: 1" = 50'	DATE: JULY 2008	DRAWING No.: 212-01-016	SHEET No.: 16 of 24

(MATCH LINE - SEE SHEET 20)

(MATCH LINE - SEE SHEET 21)



PARCEL LINE

FOREST CONSERVATION AREA

FOREST CONSERVATION AREA

DUST CONTROL NOTES:

I. THE CONTRACTOR SHALL PREVENT BLOWING AND MOVEMENT OF DUST FROM EXPOSED SOIL SURFACES TO REDUCE ON AND OFF-SITE DAMAGE, HEALTH HAZARDS, AND IMPROVE TRAFFIC SAFETY. THIS PRACTICE IS APPLICABLE TO AREAS SUBJECT TO DUST BLOWING AND MOVEMENT WHERE ON AND OFF-SITE DAMAGE IS LIKELY WITHOUT TREATMENT.

II. TEMPORARY METHODS:

A. MULCHES - SEE STANDARDS FOR VEGETATIVE STABILIZATION WITH MULCHES ONLY. MULCH SHOULD BE CRIMPED OR TACKED OR PREVENT BLOWING.

B. VEGETATIVE COVER - SEE STANDARDS FOR TEMPORARY VEGETATIVE COVER.

C. TILLAGE - TO ROUGHEN SURFACE AND BRING CLODS TO THE SURFACE. THIS IS AN EMERGENCY MEASURE WHICH SHOULD BE USED BEFORE SOIL BLOWING STARTS. BEGIN PLOWING ON WINDWARD SIDE OF SITE. CHESEL-TYPE PLOWS SPACED ABOUT 12' APART, SPRING-TOOTHED HARROWS, AND SIMILAR ARE EXAMPLES OF EQUIPMENT WHICH MAY PRODUCE PLOWS THE DESIRED EFFECT.

D. IRRIGATION - THIS IS GENERALLY DONE AS AN EMERGENCY TREATMENT. SITE IS SPRINKLED WITH WATER UNTIL THE SURFACE IS MOIST. REPEAT AS NEEDED. AT NO TIME SHOULD THE SITE BE IRRIGATED TO THE POINT THAT RUNOFF BEGINS TO FLOW.

E. BARRIERS - SOLID BOARD FENCES, SILT FENCES, SNOW FENCES, BURLAP FENCES, STRAW BALES, AND SIMILAR MATERIAL CAN BE USED TO CONTROL AIR CURRENTS AND SOIL BLOWING. BARRIERS PLACED AT RIGHT ANGLES TO PREVAILING CURRENTS AT INTERVALS OF ABOUT 10 TIMES THEIR HEIGHT ARE EFFECTIVE IN CONTROLLING SOIL BLOWING.

III. PERMANENT METHODS:

A. PERMANENT VEGETATION - SEE STANDARDS FOR PERMANENT VEGETATIVE COVER, AND PERMANENT STABILIZATION WITH SOIL. EXISTING TREES OR LARGE SHRUBS MAY AFFORD VALUABLE PROTECTION IF LEFT IN PLACE.

B. TOPSOILING - COVERING WITH LESS ERODIBLE SOIL MATERIALS.

C. STONE - COVER SURFACE WITH CRUSHED STONE OR COARSE GRAVEL.

NF
STATE OF MARYLAND
DEPT. OF NATURAL RESOURCES
MAP 65 PARCEL 13
2006/40
CONSERVATION AREA
ZONED: E-1

SWM LANDSCAPING NOTES:

A) PLANT TYPES MAY BE SUBSTITUTED FOR OTHERS USING MATERIALS NATIVE TO WORCESTER COUNTY WITH DRP APPROVAL. THE CONTRACTOR'S LANDSCAPING SUBCONTRACTOR SHALL PROVIDE A DETAILED PLANTING PLAN TO THE ENGINEER 14 DAYS PRIOR TO PLANTING.

B) THE GROUND COVER FOR THE TOP AND OUTSIDE BANKS SHALL CONSIST OF SHEEP FESCUE. MOW HEIGHT SHALL NOT BE BELOW TWO INCHES.

C) GROUND COVER FOR THE INSIDE BANKS SHALL CONSIST OF TUSSOCK SEDGE AND WOOLGRASS. MOW HEIGHT SHALL NOT BE BELOW 4 INCHES. ANNUAL MOWING ONLY IN NOVEMBER.

D) TREE AND SHRUB PRUNING IN ALL BASINS SHALL BE PERFORMED SEMI-ANNUALLY.

E) THE CONTRACTOR SHALL PLACE ALL TREES AND SHRUBS IN THE FIELD IN THE PLANNED PLANTING POSITION. THE ENGINEER AND OWNER WILL REVIEW PLACEMENT. THE ENGINEER AND OWNER RESERVE THE RIGHT TO ALTER PLACEMENT LOCATIONS AT THIS TIME. THE LANDSCAPE SUBCONTRACTOR SHALL NOT PLANT TREES OR SHRUBS WITHOUT PRIOR REVIEW BY THE ENGINEER AND OWNER.

F) ALL TREES AND SHRUBS SHALL BE MAINTAINED BY THE HOMEOWNER'S ASSOCIATION.

G) SWM STRUCTURES SHALL BE MAINTAINED BY THE HOA AND INSPECTED ANNUALLY.

SESC NOTES:

1) ALL POCKET PONDS, EMBANKMENTS AND SIDE SLOPES SHALL BE STABILIZED WITH SOD OR SEED EXCELSDIOR MATTING IN ACCORDANCE WITH THE EROSION CONTROL MATTING DETAIL, (SEE DETAIL - SHEET 23).

2) IF SHALL BE MODIFIED AGIP (MAGIP), SEE DETAIL ON SHEET 23.

3) ON-SITE DEWATERING, IF AND WHEN REQUIRED, SHALL BE PROVIDED IN ACCORDANCE WITH AN APPROVED METHOD UTILIZING ONE OR MORE OF THE FOLLOWING METHODS:

A) FILTER BAG
B) REMOVABLE PUMP STATION (RPS)
C) SUMP PIT (SP)
D) PORTABLE SEDIMENT TANK (PST)

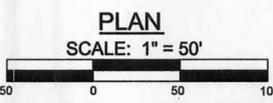
4) RIP RAP PADS SHALL BE A MINIMUM OF 2.0 S.Y., CONSTRUCTED OF MD #57 STONE ON CLASS C FABRIC. THE MINIMUM BOTTOM WIDTH SHALL BE 3.0'. MINIMUM THICKNESS SHALL BE 18". ALL RIP RAP PADS SHALL BE CONSTRUCTED PRIOR TO WATER ENTERING PIPES.

5) REFER TO TEMPORARY SESC BASIN SCHEDULE, SHEET 21 FOR DETAILS AND CLEANOUT ELEVATIONS FOR EACH INDIVIDUAL TEMPORARY SESC BASIN.



(MATCH LINE - SEE SHEET 15)

(MATCH LINE - SEE SHEET 18)



SESC LEGEND: REFER TO SHEET 20
SWM LANDSCAPING LEGEND: REFER TO SHEET 21

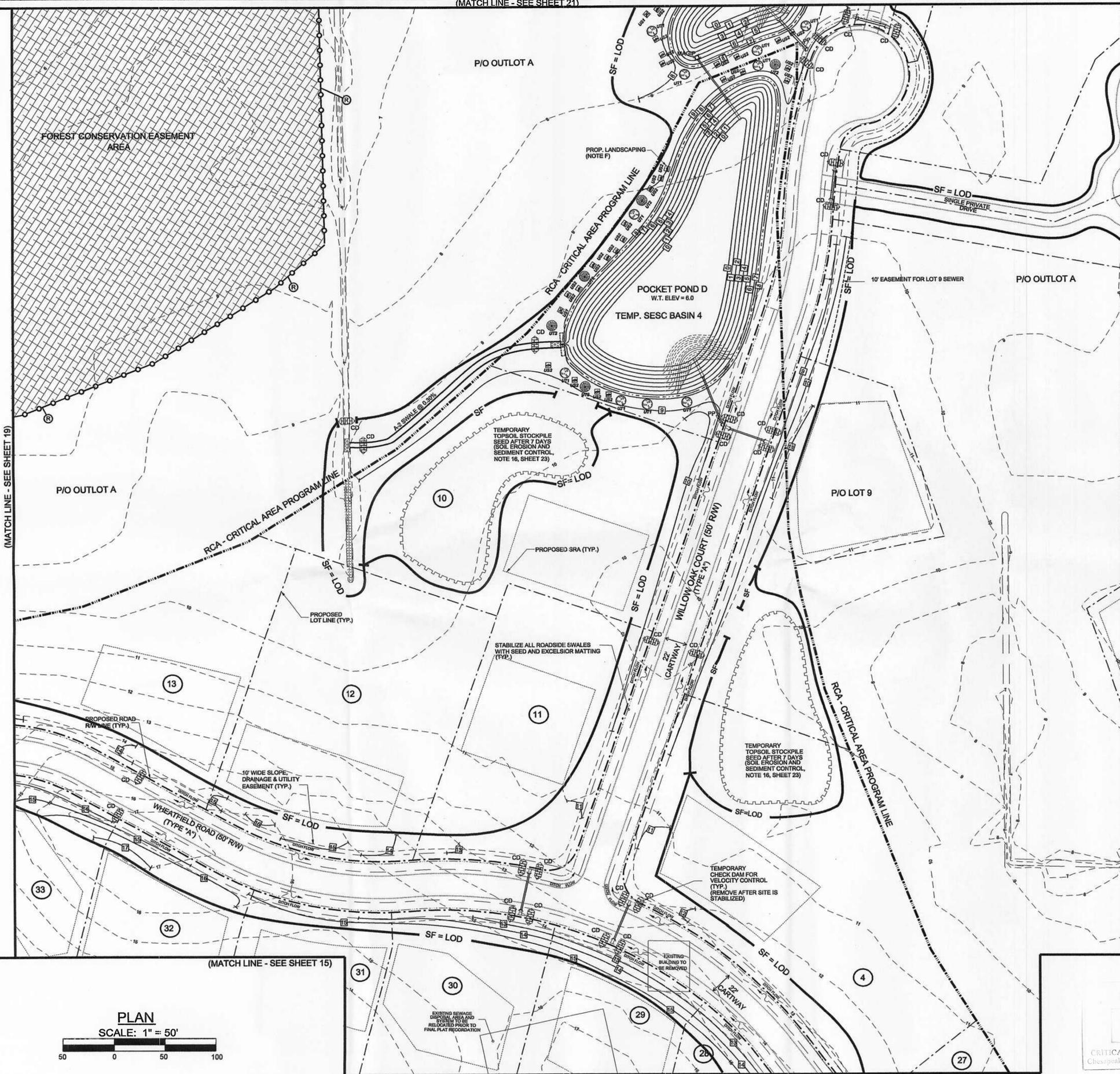


DESIGNED BY: JWS3	DRAWN BY: MG	CHECKED BY: JWS3
JOHN W. SALM, III PROFESSIONAL ENGINEER ENGINEER LICENSE No.: 19731		

SOIL EROSION AND SEDIMENT CONTROL (SESC) PLAN AND SWM LANDSCAPE PLAN		
CREEKSIDE AT PUBLIC LANDING CONSTRUCTION DRAWINGS AND SWM PLANS PARCEL 48, MAP 65 SECOND TAX DISTRICT, PUBLIC LANDING, WORCESTER COUNTY, MARYLAND		
J. W. SALM ENGINEERING, INC. P.O. BOX 397, 9842 MAIN STREET, SUITE 3 BERLIN, MD 21811		
SCALE: 1" = 50'	DATE: JULY 2008	DRAWING No.: 212-01-017
		SHEET No.: 17 of 24

MATCH LINE - SEE SHEET 20

(MATCH LINE - SEE SHEET 21)



DUST CONTROL NOTES:

- I. THE CONTRACTOR SHALL PREVENT BLOWING AND MOVEMENT OF DUST FROM EXPOSED SOIL SURFACES TO REDUCE ON AND OFF-SITE DAMAGE, HEALTH HAZARDS, AND IMPROVE TRAFFIC SAFETY. THIS PRACTICE IS APPLICABLE TO AREAS SUBJECT TO DUST BLOWING AND MOVEMENT WHERE ON AND OFF-SITE DAMAGE IS LIKELY WITHOUT TREATMENT.
- II. TEMPORARY METHODS:
 - A. MULCHES - SEE STANDARDS FOR VEGETATIVE STABILIZATION WITH MULCHES ONLY. MULCH SHOULD BE CRIMPED OR TACKED OR PREVENT BLOWING.
 - B. VEGETATIVE COVER - SEE STANDARDS FOR TEMPORARY VEGETATIVE COVER.
 - C. TILLAGE - TO ROUGHEN SURFACE AND BRING CLODS TO THE SURFACE. THIS IS AN EMERGENCY MEASURE WHICH SHOULD BE USED BEFORE SOIL BLOWING STARTS. BEGIN PLOWING ON WINDWARD SIDE OF SITE. CHESEL-TYPE PLOWS SPACED ABOUT 12' APART, SPRING-TOOTHED HARROWS, AND SIMILAR ARE EXAMPLES OF EQUIPMENT WHICH MAY PRODUCE PLOWS THE DESIRED EFFECT.
 - D. IRRIGATION - THIS IS GENERALLY DONE AS AN EMERGENCY TREATMENT. SITE IS SPRINKLED WITH WATER UNTIL THE SURFACE IS MOIST. REPEAT AS NEEDED. AT NO TIME SHOULD THE SITE BE IRRIGATED TO THE POINT THAT RUNOFF BEGINS TO FLOW.
 - E. BARRIERS - SOLID BOARD FENCES, SILT FENCES, SNOW FENCES, BURLAP FENCES, STRAW SALES, AND SIMILAR MATERIAL CAN BE USED TO CONTROL AIR CURRENTS AND SOIL BLOWING. BARRIERS PLACED AT RIGHT ANGLES TO PREVAILING CURRENTS AT INTERVALS OF ABOUT 10 TIMES THEIR HEIGHT ARE EFFECTIVE IN CONTROLLING SOIL BLOWING.
- III. PERMANENT METHODS:
 - A. PERMANENT VEGETATION - SEE STANDARDS FOR PERMANENT VEGETATIVE COVER, AND PERMANENT STABILIZATION WITH SOD. EXISTING TREES OR LARGE SHRUBS MAY AFFORD VALUABLE PROTECTION IF LEFT IN PLACE.
 - B. TOPSOILING - COVERING WITH LESS ERODIBLE SOIL MATERIALS.
 - C. STONE - COVER SURFACE WITH CRUSHED STONE OR COARSE GRAVEL.

SWM LANDSCAPING NOTES:

- A) PLANT TYPES MAY BE SUBSTITUTED FOR OTHERS USING MATERIALS NATIVE TO WORCESTER COUNTY WITH DRP APPROVAL. THE CONTRACTOR'S LANDSCAPING SUBCONTRACTOR SHALL PROVIDE A DETAILED PLANTING PLAN TO THE ENGINEER 14 DAYS PRIOR TO PLANTING.
- B) THE GROUND COVER FOR THE TOP AND OUTSIDE BANKS SHALL CONSIST OF SHEEP FESCUE. MOW HEIGHT SHALL NOT BE BELOW TWO INCHES.
- C) GROUND COVER FOR THE INSIDE BANKS SHALL CONSIST OF TUSsock SEDGE AND WOOLGRASS. MOW HEIGHT SHALL NOT BE BELOW 4 INCHES. ANNUAL MOWING ONLY IN NOVEMBER.
- D) TREE AND SHRUB PRUNING IN ALL BASINS SHALL BE PERFORMED SEMI-ANNUALLY.
- E) THE CONTRACTOR SHALL PLACE ALL TREES AND SHRUBS IN THE FIELD IN THE PLANNED PLANTING POSITION. THE ENGINEER AND OWNER WILL REVIEW PLACEMENT. THE ENGINEER AND OWNER RESERVE THE RIGHT TO ALTER PLACEMENT LOCATIONS AT THIS TIME. THE LANDSCAPE SUBCONTRACTOR SHALL NOT PLANT TREES OR SHRUBS WITHOUT PRIOR REVIEW BY THE ENGINEER AND OWNER.
- F) ALL TREES AND SHRUBS SHALL BE MAINTAINED BY THE HOMEOWNERS ASSOCIATION.
- G) SWM STRUCTURES SHALL BE MAINTAINED BY THE HOA AND INSPECTED ANNUALLY.

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- 2) IP SHALL BE MODIFIED AGP (MAGIP), SEE DETAIL ON SHEET 23.
- 3) ON-SITE Dewatering, IF AND WHEN REQUIRED, SHALL BE PROVIDED IN ACCORDANCE WITH AN APPROVED METHOD UTILIZING ONE OR MORE OF THE FOLLOWING METHODS:
 - A) FILTER BAG
 - B) REMOVABLE PUMP STATION (RPS)
 - C) SUMP PIT (SP)
 - D) PORTABLE SEDIMENT TANK (PST)
- 4) RIP RAP PADS SHALL BE A MINIMUM OF 2.0 S.Y., CONSTRUCTED OF MD #57 STONE ON CLASS C FABRIC. THE MINIMUM BOTTOM WIDTH SHALL BE 3.0', MINIMUM THICKNESS SHALL BE 18". ALL RIP RAP PADS SHALL BE CONSTRUCTED PRIOR TO WATER ENTERING PIPES.
- 5) REFER TO TEMPORARY SESCO BASIN SCHEDULE, SHEET 21 FOR DETAILS AND CLEANOUT ELEVATIONS FOR EACH INDIVIDUAL TEMPORARY SESC BASIN.

SESC LEGEND: REFER TO SHEET 20

SWM LANDSCAPING LEGEND: REFER TO SHEET 21



DESIGNED BY: JWS3	DRAWN BY: MG	CHECKED BY: JWS3	SOIL EROSION AND SEDIMENT CONTROL (SESC) PLAN AND SWM LANDSCAPE PLAN
JOHN W. SALM, III LICENSE NO. 18731 STATE OF MARYLAND ENGINEER LICENSE NO. 18731			REVISIONS CREEKSIDE AT PUBLIC LANDING CONSTRUCTION DRAWINGS AND SWM PLANS PARCEL 4B, MAP 65 SECOND TAX DISTRICT, PUBLIC LANDINGS, WORCESTER COUNTY, MARYLAND J. W. SALM ENGINEERING, INC. P.O. BOX 387, 9842 MAIN STREET, SUITE 3 BERLIN, MD 21811
SCALE: 1" = 50'	DATE: JULY 2008	DRAWING No.: 212-01-018	SHEET No.: 18 of 24

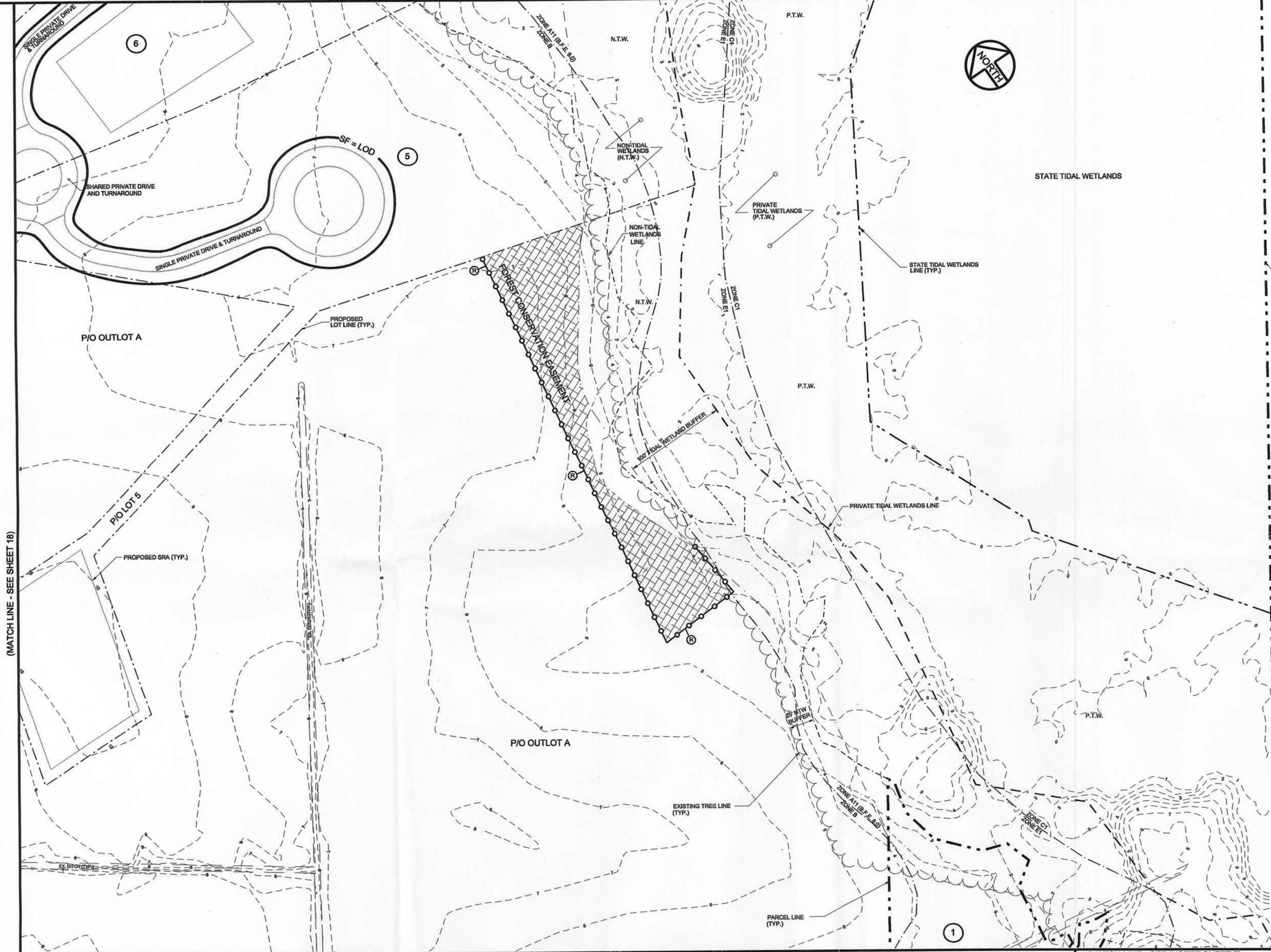
(MATCH LINE - SEE SHEET 19)

(MATCH LINE - SEE SHEET 19)

(MATCH LINE - SEE SHEET 15)

(MATCH LINE - SEE SHEET 16)

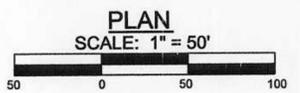
(MATCH LINE - SEE SHEET 21)



(MATCH LINE - SEE SHEET 18)

(MATCH LINE - SEE SHEET 16)

(MATCH LINE - SEE INSERT SHEET 7)



N/F
COUNTY COMMISSIONERS OF
WORCESTER COUNTY
MAP 65 PARCEL 78 LOT 1
2880/6
EXEMPT COMMERCIAL
ZONED: E-1

DUST CONTROL NOTES:

- I. THE CONTRACTOR SHALL PREVENT BLOWING AND MOVEMENT OF DUST FROM EXPOSED SOIL SURFACES TO REDUCE ON AND OFF-SITE DAMAGE, HEALTH HAZARDS, AND IMPROVE TRAFFIC SAFETY. THIS PRACTICE IS APPLICABLE TO AREAS SUBJECT TO DUST BLOWING AND MOVEMENT WHERE ON AND OFF-SITE DAMAGE IS LIKELY WITHOUT TREATMENT.
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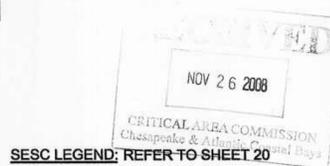
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- A) PLANT TYPES MAY BE SUBSTITUTED FOR OTHERS USING MATERIALS NATIVE TO WORCESTER COUNTY WITH DRP APPROVAL. THE CONTRACTOR'S LANDSCAPING SUBCONTRACTOR SHALL PROVIDE A DETAILED PLANTING PLAN TO THE ENGINEER 14 DAYS PRIOR TO PLANTING.
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SESC NOTES:

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- 2) IP SHALL BE MODIFIED AGIP (MAGIP), SEE DETAIL ON SHEET 23.
- 3) ON-SITE DEWATERING, IF AND WHEN REQUIRED, SHALL BE PROVIDED IN ACCORDANCE WITH AN APPROVED METHOD UTILIZING ONE OR MORE OF THE FOLLOWING METHODS:
 - A) FILTER BAG
 - B) REMOVABLE PUMP STATION (RPS)
 - C) SLUMP PIT (SP)
 - D) PORTABLE SEDIMENT TANK (PST)
- 4) RIP RAP PADS SHALL BE A MINIMUM OF 2.0 S.Y., CONSTRUCTED OF MD #57 STONE ON CLASS C FABRIC. THE MINIMUM BOTTOM WIDTH SHALL BE 3.0'. MINIMUM THICKNESS SHALL BE 18". ALL RIP RAP PADS SHALL BE CONSTRUCTED PRIOR TO WATER ENTERING PIPES.
- 5) REFER TO TEMPORARY SESC BASIN SCHEDULE, SHEET 21 FOR DETAILS AND CLEANOUT ELEVATIONS FOR EACH INDIVIDUAL TEMPORARY SESC BASIN.

DESIGNED BY: JWS3	DRAWN BY: MG	CHECKED BY: JWS3	SOIL EROSION AND SEDIMENT CONTROL (SESC) PLAN AND SWM LANDSCAPE PLAN
JOHN W. SALKM, III STATE OF MARYLAND PROFESSIONAL ENGINEER LICENSE NO. 19731			CREEKSIDE AT PUBLIC LANDING CONSTRUCTION DRAWINGS AND SWM PLANS PARCEL 48, MAP 65 SECOND TAX DISTRICT, PUBLIC LANDINGS, WORCESTER COUNTY, MARYLAND J. W. SALKM ENGINEERING, INC. P.O. BOX 397, 9842 MAIN STREET, SUITE 3 BERLIN, MD 21811
REVISIONS _____ _____ _____			SCALE: 1" = 50' DATE: JULY 2008 DRAWING No.: 212-01-019 SHEET No.: 19 of 24





(MATCH LINE - SEE SHEET 8)

(MATCH LINE - SEE SHEET 9)

PARCEL LINE

FOREST CONSERVATION AREA

FOREST CONSERVATION AREA

P/O OUTLOT A

RCA - CRITICAL AREA PROGRAM LINE

PROPOSED BUILDING RESTRICTION LINE (TYP.)

PROPOSED SRA (TYP.)

PROPOSED WATER WELL (TYP.)

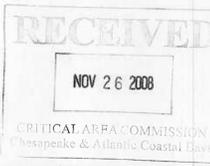
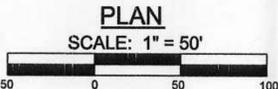
PROPOSED LOT LINE (TYP.)

PROPOSED ROAD (50' RW) WHEATFIELD (TYPE 'A')

EXISTING TREE LINE (TYP.)

(MATCH LINE - SEE SHEET 3)

- NOTES:**
1. ALL ROADS OTHER THAN PRIVATE DRIVES SHALL BE BUILT TO COUNTY SPECIFICATIONS AND SHALL BE DEDICATED TO WORCESTER COUNTY.
 2. PROVIDE FLARED END SECTION & RIP RAP APRON, 18" THICK, D50 - 6" ON FILTER FABRIC. APRON SIZE AS SHOWN ON PLANS, 2.0 SQ. YD. MIN.
 3. ALL ROAD AND DIRECTIONAL SIGNS SHALL HAVE DIAMOND GRADE REFLECTIVE MATERIAL. STREET SIGNS SHALL HAVE SIX INCH LETTERS.
 4. REFER TO MSHA ENTRANCE DRAWING PLAN SET FOR ADDITIONAL DETAILS IN THIS AREA.
 5. UNLESS OTHERWISE NOTED, ALL STORM DRAIN PIPES SHALL BE SMOOTH-BORE, HDPE-SI, ADS N-12, OR EQUAL. HDPE-SI = HIGH DENSITY POLYETHYLENE PIPE (SMOOTH INTERIOR).
 6. BCCMP = BITUMINOUS COATED, GALVANIZED CORRUGATED METAL PIPE.
 7. ASCMP = ASPHALT-SPUN CORRUGATED METAL PIPE (SMOOTH INTERIOR).
 8. ALL SLOPES AT 1:1 SLOPE OR GREATER SHALL RECEIVE EXCEL-SIOR MATTING PROTECTION.
 9. PORTIONS OF THIS SITE LIE WITHIN THE ATLANTIC COASTAL BAYS, CRITICAL AREA.
 10. PROVIDE FOREBAY DIKE CONSTRUCTED FROM MARYLAND #67 CLEAN STONE.
 11. THE CONTRACTOR SHALL SCHEDULE A PRE-CONSTRUCTION MEETING WITH WORCESTER COUNTY DPW, PRIOR TO THE START OF CONSTRUCTION.
 12. FENCE, SWM BASINS, LANDSCAPING AND EQUALIZATION PIPES BETWEEN BASINS SHALL BE MAINTAINED BY THE HOMEOWNER'S ASSOCIATION.
 13. MINIMUM F.F. EL. FOR ALL NON-CRITICAL AREA LOTS SHALL EQUAL 2 FEET ABOVE EXISTING GRADE OR ELEVATION 10 FEET, WHICHEVER IS HIGHER.
 14. THE CONTRACTOR SHALL PROVIDE ROAD AS-BUILTS SHOWING THE ELEVATIONS OF EDGE OF PAVEMENT, PAVEMENT CENTERLINE, ALONG WITH JUNCTION BOXES AND PIPE INVERT AND RIM ELEVATIONS. THE ROAD AS-BUILTS SHALL LABEL ROAD ELEVATIONS AT FIFTY-FOOT INTERVALS ON CURVES AND ONE-HUNDRED FOOT INTERVALS ON STRAIGHT RUNS.
 15. ROAD SPEED LIMIT SIGNS AND STOP SIGNS SHALL BE PLACED AT ALL LOCATIONS SPECIFIED BY W.O. CO. ALL OTHER SIGNS TO MEET UNIFORM TRAFFIC CONTROL DEVICE SPECIFICATIONS. GEOTECHNICAL TESTING SHALL BE THE RESPONSIBILITY OF THE DEVELOPER. AN AUTHORIZED GEOTECHNICAL INSPECTOR SHALL BE ON-SITE DURING ALL PHASES OF ROAD AND UTILITY CONSTRUCTION.



THE ROADS AND STORMDRAIN TO BE CONSTRUCTED IN ACCORDANCE WITH THESE PLANS ARE APPROVED BY WORCESTER COUNTY ROADS.

ROADS SUPERINTENDENT
WORCESTER COUNTY DEPARTMENT OF PUBLIC WORKS

THE ROADS AND STORMDRAIN TO BE CONSTRUCTED IN ACCORDANCE WITH THESE PLANS ARE APPROVED BY WORCESTER COUNTY DEPARTMENT OF PUBLIC WORKS.

DIRECTOR
WORCESTER COUNTY DEPARTMENT OF PUBLIC WORKS

DESIGNED BY: LCS
DRAWN BY: MG
CHECKED BY: JWS3

REVISIONS

JOHN W. GALM, III
STATE OF MARYLAND
PROFESSIONAL ENGINEER
LICENSE NO. 19731

ROAD, GRADING AND SWM PLAN

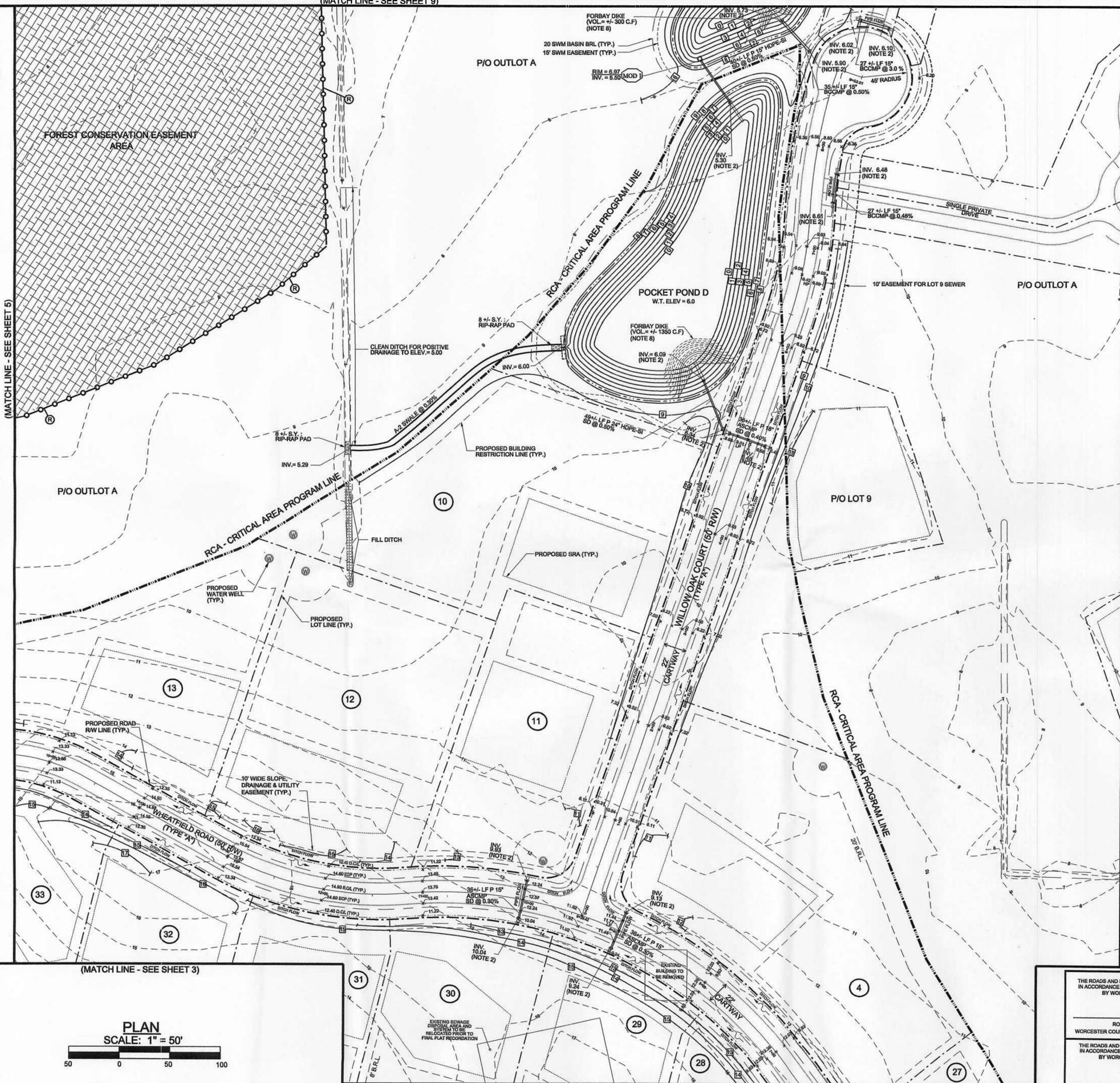
CREEKSIDE AT PUBLIC LANDING
CONSTRUCTION DRAWINGS AND SWM PLANS
PARCEL 48, MAP 65
SECOND TAX DISTRICT, PUBLIC LANDING, WORCESTER COUNTY MARYLAND

J. W. GALM ENGINEERING, INC.
P.O. BOX 397, 9842 MAIN STREET, SUITE 3
BERLIN, MD 21811

SCALE: 1" = 50'
DATE: JULY 2008
DRAWING No.: 212-01-005
SHEET No.: 5 of 24

MATCH LINE - SEE SHEET 8

MATCH LINE - SEE SHEET 9

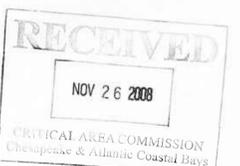


MATCH LINE - SEE SHEET 5

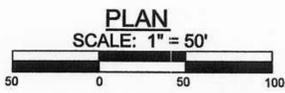
MATCH LINE - SEE SHEET 7

MATCH LINE - SEE SHEET 3

MATCH LINE - SEE SHEET 4



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 3. ALL ROAD AND DIRECTIONAL SIGNS SHALL HAVE DIAMOND GRADE REFLECTIVE MATERIAL. STREET SIGNS SHALL HAVE SIX INCH LETTERS.
 4. REFER TO MSHA ENTRANCE DRAWING PLAN SET FOR ADDITIONAL DETAILS IN THIS AREA.
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 6. BCCMP = BITUMINOUS COATED, GALVANIZED CORRUGATED METAL PIPE. ASCMP = ASPHALT-SPUN CORRUGATED METAL PIPE (SMOOTH INTERIOR)
 7. PORTIONS OF THIS SITE LIE WITHIN THE ATLANTIC COASTAL BAYS, CRITICAL AREA.
 8. PROVIDE FOREBAY DIKE CONSTRUCTED FROM MARYLAND #77 CLEAN STONE.
 9. THE CONTRACTOR SHALL SCHEDULE A PRE-CONSTRUCTION MEETING WITH WORCESTER COUNTY DPW, PRIOR TO THE START OF CONSTRUCTION.
 10. FENCE, SWM BASINS, LANDSCAPING AND EQUALIZATION PIPES BETWEEN BASINS SHALL BE MAINTAINED BY THE HOMEOWNERS ASSOCIATION.
 11. MINIMUM F.F. EL. FOR ALL NON-CRITICAL AREA LOTS SHALL EQUAL 2 FEET ABOVE EXISTING GRADE OR ELEVATION 10 FEET, WHICHEVER IS HIGHER.
 12. THE CONTRACTOR SHALL PROVIDE ROAD AS-BUILTS SHOWING THE ELEVATIONS OF EDGE OF PAVEMENT, PAVEMENT CENTERLINE, ALONG WITH JUNCTION BOXES AND PIPE INVERT AND RIM ELEVATIONS. THE ROAD AS-BUILTS SHALL LABEL ROAD ELEVATIONS AT FIFTY-FOOT INTERVALS ON CURVES AND ONE-HUNDRED FOOT INTERVALS ON STRAIGHT RUNS.
 13. ROAD SPEED LIMIT SIGNS AND STOP SIGNS SHALL BE PLACED AT ALL LOCATIONS SPECIFIED BY W.O. CO. ALL OTHER SIGNS TO MEET UNIFORM TRAFFIC CONTROL DEVICE SPECIFICATIONS. GEOTECHNICAL TESTING SHALL BE THE RESPONSIBILITY OF THE DEVELOPER. AN AUTHORIZED GEOTECHNICAL INSPECTOR SHALL BE ON-SITE DURING ALL PHASES OF ROAD AND UTILITY CONSTRUCTION.



THE ROADS AND STORMDRAIN TO BE CONSTRUCTED IN ACCORDANCE WITH THESE PLANS ARE APPROVED BY WORCESTER COUNTY ROADS.

ROADS SUPERINTENDENT
WORCESTER COUNTY DEPARTMENT OF PUBLIC WORKS

THE ROADS AND STORMDRAIN TO BE CONSTRUCTED IN ACCORDANCE WITH THESE PLANS ARE APPROVED BY WORCESTER COUNTY DEPARTMENT OF PUBLIC WORKS.

DIRECTOR
WORCESTER COUNTY DEPARTMENT OF PUBLIC WORKS

DESIGNED BY: LCS
DRAWN BY: MG
CHECKED BY: JWS3

JOHN W. SALM, III
REVISIONS

STATE OF MARYLAND
PROFESSIONAL ENGINEER
LICENSE NO. 19731

ROAD, GRADING AND SWM PLAN

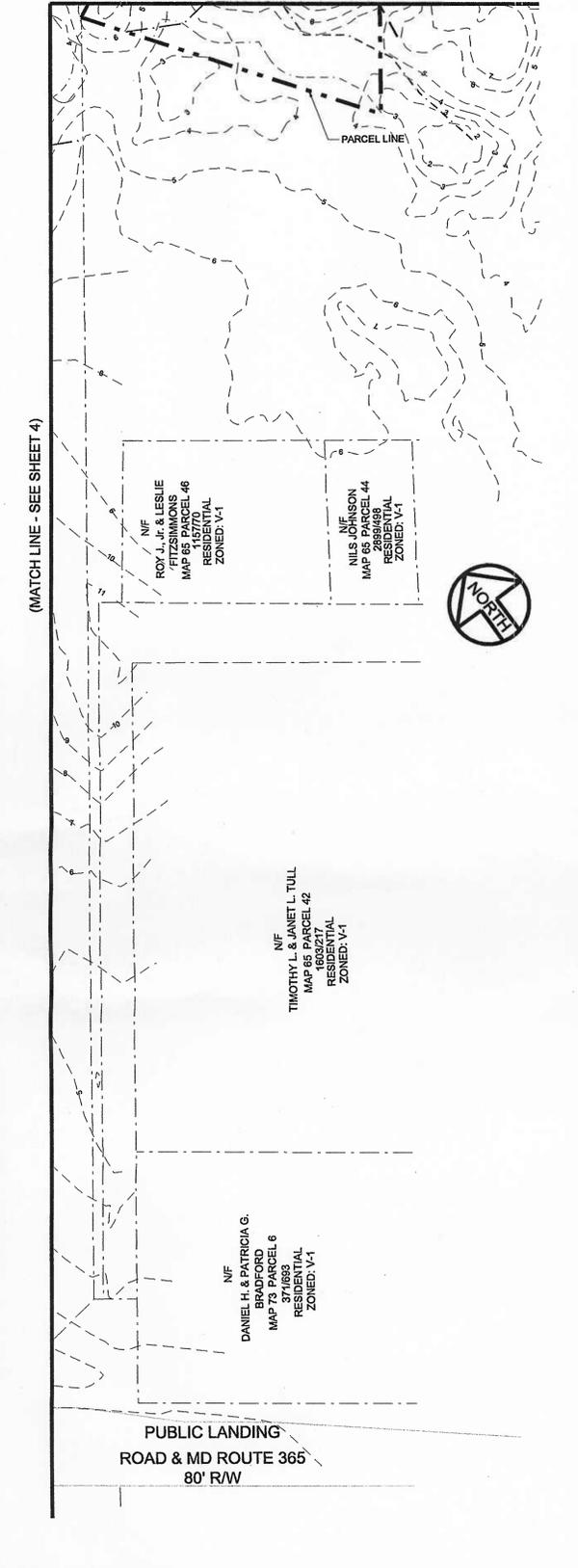
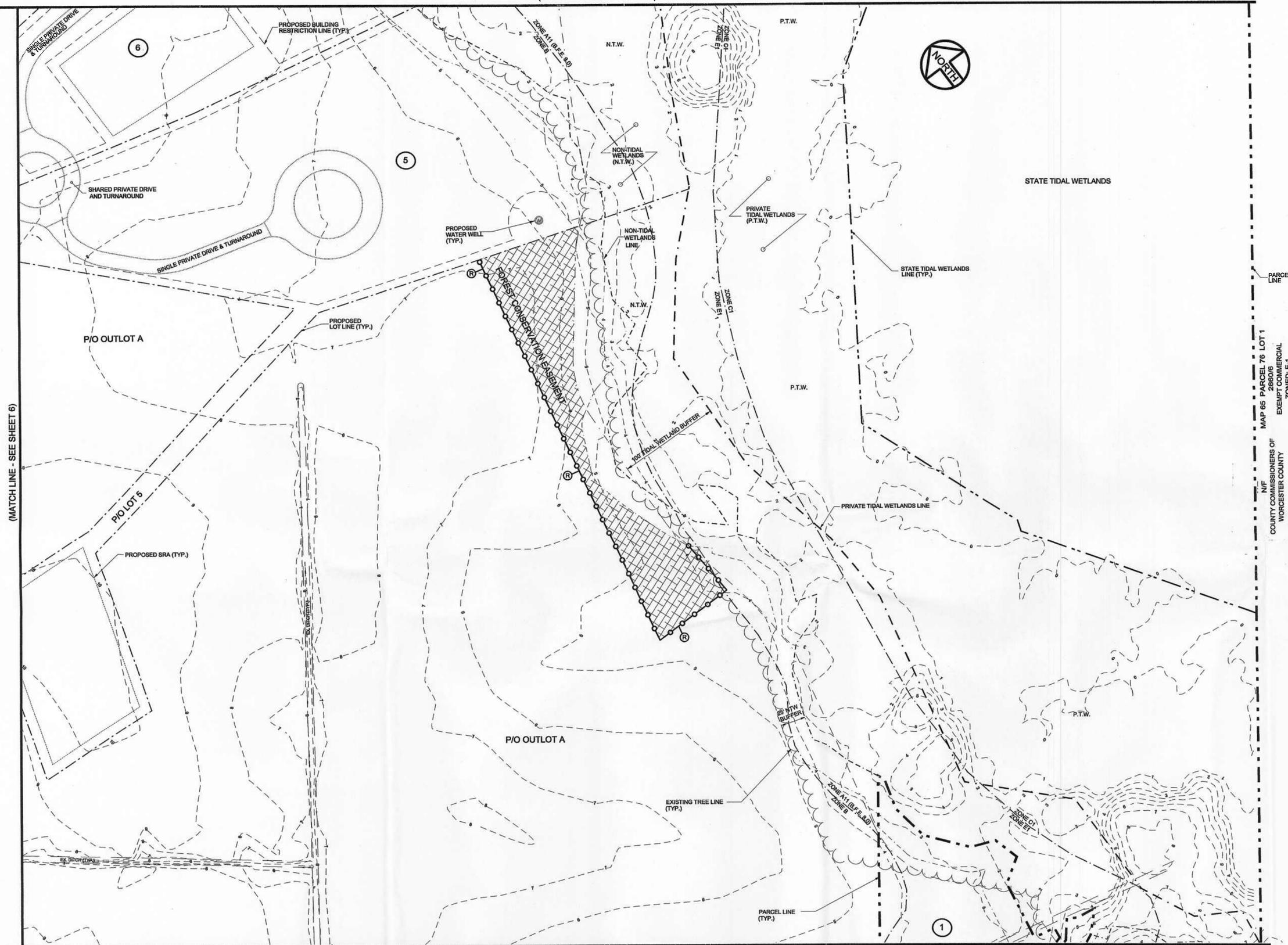
**CREEKSIDE AT PUBLIC LANDING
CONSTRUCTION DRAWINGS AND SWM PLANS**
PARCEL 48, MAP 65
SECOND TAX DISTRICT, PUBLIC LANDING, WORCESTER COUNTY, MARYLAND

J. W. SALM ENGINEERING, INC.
P.O. BOX 397, 9842 MAIN STREET, SUITE 3
BERLIN, MD 21811

SCALE: 1" = 50'
DATE: JULY 2008
DRAWING No.: 212-01-006
SHEET No.: 6 of 24

(MATCH LINE - SEE SHEET 9)

(MATCH LINE - SEE THIS SHEET)



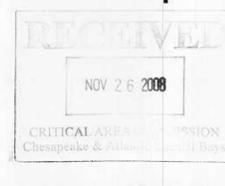
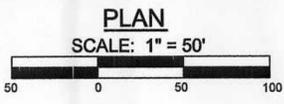
(MATCH LINE - SEE SHEET 6)

(MATCH LINE - SEE SHEET 4)

(MATCH LINE - SEE SHEET 4)

(MATCH LINE - SEE INSERT THIS SHEET)

- NOTES:**
1. ALL ROADS OTHER THAN PRIVATE DRIVES SHALL BE BUILT TO COUNTY SPECIFICATIONS AND SHALL BE DEDICATED TO WORCESTER COUNTY.
 2. PROVIDE FLARED END SECTION & RIP RAP APRON, 18" THICK, D50 = 6" ON FILTER FABRIC. APRON SIZE AS SHOWN ON PLANS, 2.0 SQ. YD. MIN.
 3. ALL ROAD AND DIRECTIONAL SIGNS SHALL HAVE DIAMOND GRADE REFLECTIVE MATERIAL. STREET SIGNS SHALL HAVE SIX INCH LETTERS.
 4. REFER TO MSHA ENTRANCE DRAWING PLAN SET FOR ADDITIONAL DETAILS IN THIS AREA.
 5. UNLESS OTHERWISE NOTED, ALL STORM DRAIN PIPE SHALL BE SMOOTH-BORE, HDPE-SI, ADS N-12, OR EQUAL. HDPE-SI: HIGH DENSITY POLYETHYLENE PIPE (SMOOTH INTERIOR)
 6. BCCMP = BITUMINOUS COATED, GALVANIZED CORRUGATED METAL PIPE.
 7. ALL SLOPES AT 3:1 OR GREATER SHALL RECEIVE EXCELSIOR MATTING PROTECTION.
 8. PORTIONS OF THIS SITE LIE WITHIN THE ATLANTIC COASTAL BAYS, CRITICAL AREA.
 9. PROVIDE FOREBAY DIKE CONSTRUCTED FROM MARYLAND #67 CLEAN STONE.
 10. THE CONTRACTOR SHALL SCHEDULE A PRE-CONSTRUCTION MEETING WITH WORCESTER COUNTY DPW, PRIOR TO THE START OF CONSTRUCTION.
 10. FENCE, SWM BASINS, LANDSCAPING AND EQUALIZATION PIPES BETWEEN BASINS SHALL BE MAINTAINED BY THE HOMEOWNER'S ASSOCIATION.
 11. MINIMUM F.F. EL. FOR ALL NON-CRITICAL AREA LOTS SHALL EQUAL 2 FEET ABOVE EXISTING GRADE OR ELEVATION 10 FEET, WHICHEVER IS HIGHER.
 12. THE CONTRACTOR SHALL PROVIDE ROAD AS-BUILTS SHOWING THE ELEVATIONS OF EDGE OF PAVEMENT, PAVEMENT CENTERLINE, ALONG WITH JUNCTION BOXES AND PIPE INVERT AND RIM ELEVATIONS. THE ROAD AS-BUILTS SHALL LABEL ROAD ELEVATIONS AT FIFTY-FOOT INTERVALS ON CURVES AND ONE-HUNDRED FOOT INTERVALS ON STRAIGHT RUNS.
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ROADS SUPERINTENDENT
WORCESTER COUNTY DEPARTMENT OF PUBLIC WORKS

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DIRECTOR
WORCESTER COUNTY DEPARTMENT OF PUBLIC WORKS

DESIGNED BY: LCS	DRAWN BY: MG	CHECKED BY: JWS3
REVISIONS		

ROAD, GRADING AND SWM PLAN			
CREEKSIDE AT PUBLIC LANDING CONSTRUCTION DRAWINGS AND SWM PLANS			
PARCEL 48, MAP 65 SECOND TAX DISTRICT, PUBLIC LANDING, WORCESTER COUNTY, MARYLAND			
J. W. SALM ENGINEERING, INC.			
P.O. BOX 397, 9842 MAIN STREET, SUITE 3 BERLIN, MD 21811			
SCALE: 1" = 50'	DATE: JULY 2008	DRAWING No.: 212-01-007	SHEET No.: 7 of 24



N/F
STATE OF MARYLAND
DEPT. OF NATURAL RESOURCES
MAP 65 PARCEL 13
2006/40
CONSERVATION AREA
ZONED: E-1

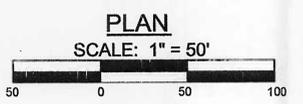
N/F
NORMAN H. & DONNA F.
TARR
MAP 65 PARCEL 60
2919/99 4
AGRICULTURAL
ZONED: E-1

(MATCH LINE - SEE SHEET 6)

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6. ALL SLOPES AT 3:1 SLOPE OR GREATER SHALL RECEIVE EXPLOSION MATTING PROTECTION.
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(MATCH LINE - SEE SHEET 5)



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DIRECTOR
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DESIGNED BY: LCS
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CHECKED BY: JWS3

JOHN W. SALLM, III
STATE OF MARYLAND
PROFESSIONAL ENGINEER
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ROAD, GRADING AND SWM PLAN			
CREEKSIDE AT PUBLIC LANDING CONSTRUCTION DRAWINGS AND SWM PLANS PARCEL 48, MAP 65 SECOND TAX DISTRICT, PUBLIC LANDING, WORCESTER COUNTY, MARYLAND			
J. W. SALLM ENGINEERING, INC. P.O. BOX 397, 9842 MAIN STREET, SUITE 3 BERLIN, MD 21811			
SCALE:	DATE:	DRAWING No.:	SHEET No.:
1" = 50'	JULY 2008	212-01-008	8 of 24

